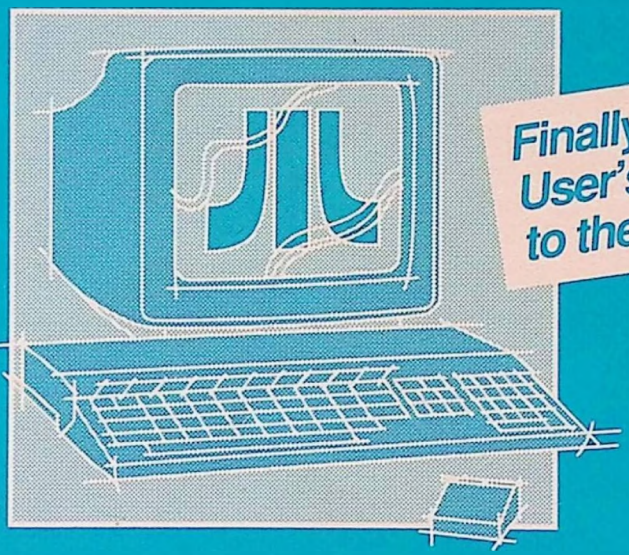
The Atari ST Book



Finally... a User's Guide to the ST

Tips, Instructions, Secrets and Hints for the 520, 1040 and Mega STs

by Ralph C. Turner

The Atari ST can be a powerful and easy-to-use computer, but until now many of its features and capabilities haven't been adequately explained in language that the non-programmer can understand.

The Atari ST Book

of Tips, Instructions, Secrets and Hints for the 520, 1040 and Mega STs begins where the Atari Owner's Manuals left off, providing step-by-step instructions that help both beginning and experienced users to get the most out of their STs.

TOPICS COVERED INCLUDE

- RAM Disks
- Using (or Replacing) the Item Selector
- The DESKTOP.INF File and the Control Panel
- Desk Accessories
- Installing an Application
- Printers and How to Control Them
- Word Processors
- Desktop Tricks
- Files and Their Management
- The AUTO Folder
- Copying
- Adjusting the Control Panel's Palette Settings
- Cold Boots and Warm Boots
- Public Domain Software
- Modems and Telecommunications
- and many other subjects

Includes a List of Over 30 Magazines (Worldwide) with ST Coverage

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BOOK of TIPS

INSTRUCTIONS

SECRETS and HINTS

for the 520, 1040

and Mega STs

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For instance, [Control]+[X] is an instruction to press the [Control] key and hold it down, then at the same time press the [X] key.

If two keys are to be pressed in sequence, a comma (,) will separate the keys. For instance, [Alternate],[Home] is an instruction to press the [Alternate] key, release it, then press the [Home] key.

"Double-clicking" refers to the process of clicking the left mouse button twice in order to select an item, whereas "mouse-clicking" refers to clicking the left mouse button only once.

The first time a commercial piece of software or hardware is mentioned in the text, the name of the product's supplier is given. Then, in Appendix B, a list of all the suppliers and their addresses is presented.

Finally, here's a request. I'm already working on a second book covering the Atari ST, and I could use your help. If there's a subject you're interested in that I've neglected to cover in the present book, I'd like to know. Drop me a note at the following address, and if you include your name and address, I'll try to respond.

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CHAPTER ONE

RAM DISKS

QUESTION: What's a RAM disk?

ANSWER: It's a portion of your ST's RAM (Random Access Memory) which is set aside and treated as if it were a real, physical disk drive. Although it's created by software and therefore isn't a "disk," it nonetheless acts just like a disk drive. Its icon appears on your Desktop and you can use it just as you'd use any other drive. You can copy files to it, temporarily save files to it, and delete files and execute programs from it.

QUESTION: Why would I want a RAM disk when I already have a floppy disk drive?

ANSWER: There are four main reasons to use a RAM disk:

1. RAM disks are fast.
2. They extend the life of your floppy and hard drives.
3. They provide a cheap way of getting an extra drive.
4. If you have only one disk drive, a RAM disk allows for quicker and safer copying of files.

RAM DISKS ELIMINATE "DISK SHUFFLE"

If you only have one disk drive, you'll especially appreciate a RAM disk. It will make copying files from one floppy disk to another a lot easier and quicker. Just copy the files to the RAM disk, exchange floppies (only once!), then copy the files back to the new floppy. That old "disk shuffle," at which you've become so adept, will be a thing of the past.

QUESTION: But I already have two floppy drives. Could I still use a RAM disk?

ANSWER: Yes. You'll still benefit from the lightning-fast access time of a RAM disk. Let's say, for example, that you load your word processor (or any other program) into the RAM disk. When you want to save or print a document you're working on, the process will go very quickly. That's because there's no writing or reading to or from a physical drive, processes which are as slow as molasses compared to the speed of the ST's 68000 chip. Programers really appreciate a RAM disk. An assembler pass, for instance, that would take ten minutes with a floppy disk might only take one minute with a RAM disk.

QUESTION: Would a RAM disk be useful for someone who already has a hard drive?

ANSWER: Yes. Even though hard disks are fast, they still are mechanical drives, and therefore can be a bit slower than a RAM disk.

ELIMINATE WEAR AND TEAR

In addition to speeding up your computing, a RAM disk may cut down on repair bills. Whenever you use the RAM disk, you're not using a mechanical drive. And since it's the drives (both floppy and hard) that typically wear out on a computer, and not the electronic circuitry, a RAM disk can extend the life of your ST's floppy drives and hard disk.

THE DISAPPEARANCE PROBLEM

In the past, however, there's been a problem with what I'll call "non-survivable" RAM disks. The files and programs that you copy into such a RAM disk will disappear quicker than you can say "whoops," not only whenever you turn off the power, but also whenever you press [Reset].

If you're like me, this has made you afraid to really use a RAM disk, since you may have to press the [Reset] button at any time. You never know, for instance, until you run a new public domain (PD) program for the first time, what's going to happen. Is it going to be one of those little darlings from which the only way to exit is by resetting? Or worse yet, will it lock up your ST as soon as you open the program? If so, it's reset-time, and bye-bye to the RAM disk's contents.

THE SOLUTION

Now, however, there are RAM disks that can survive a soft boot. (A "soft boot" is what occurs after you press [Reset]. It's contrasted with a "hard boot," which occurs when you turn the ST's power switch on.) Some of these survivable RAM disks are in the public domain, which means that they're free. One such PD RAM disk is YARD.PRG, and if you have to use the [Reset] button, anything you've loaded or saved to this RAM disk will still be there after the soft boot. (See Chapter 11 for information about how to receive PD programs free.)

THE IMPORTANCE OF SAVING

An interruption in power, whether it's caused by shutting the machine off, or by a storm-related power outage, will immediately erase everything that's in a RAM disk. Therefore, make sure to copy onto a floppy disk (or hard disk) anything you want to save, before powering down. In fact, I take it one step further, and *periodically* save the contents of my RAM disk to a floppy. It's also a good idea to copy anything important in your RAM disk to a physical drive before you run any untested program that might cause a system crash.

QUESTION: I downloaded a public domain RAM disk, but whenever I double-click on it, nothing seems to happen.

ANSWER: When you double-clicked on the program, the RAM disk *was* created. However, before you can use most RAM disks, you first have to install an icon for them. This just involves instructing GEM to place a disk icon on the Desktop specifically for the RAM disk. Here's how to do it.

HOW TO INSTALL A RAM DISK ICON

1. From the Desktop, click once on one of the existing drive icons (it doesn't matter which one).

2. Choose INSTALL DISK DRIVE from the OPTIONS menu.

3. With the cursor (which is a thin vertical line) on the DRIVE IDENTIFIER line, press the [Esc] key. This will erase the letter designation of the existing drive. Now type in whatever letter you want to use to identify the new RAM disk. Note: Don't use the lowercase letter c, since that letter is reserved for the cartridge

port. (Just for fun, however, you can install a drive icon with this letter, then double-click on the new drive's icon. The name on the resultant window may surprise you.)

4. Move the cursor to the ICON LABEL line, press [Esc], and type in a name for the drive. You can choose any name you want, but most people simply call the drive "RAM DISK."

5. Mouse-click on the INSTALL box and a new disk icon will appear on the Desktop. If you can't see the new icon, it's probably hidden under a window or another disk icon. If so, you'll have to move the other icons and windows in order to uncover the new icon.

Now that the new icon is installed on the Desktop, double-click on it. If you get an error message that "The drive you specified does not exist," this means you have not yet run your RAM disk. If this is the case, double-click on the RAM disk program in order to run it. After a few seconds you'll be returned to the Desktop, and you can now open the RAM disk's window by double-clicking on its icon.

If you've done everything properly, its window will open and you can start using it just like any other drive. For instance, just as with a floppy disk, you can mouse-click on the RAM disk's icon, then choose SHOW INFO from the FILE menu in order to determine the size of the RAM disk, as well as see how much free memory it has available.

AVOID REPEATED INSTALLATIONS

QUESTION: I've installed the RAM disk's icon and been successful in using the new disk, but every time I turn on the computer I have to go through the whole icon installation process again.

ANSWER: What you need to do is *save* the RAM disk's icon installation to the DESKTOP.INF file. This will cause the icon to automatically appear each time you boot up. To do this, make sure the RAM disk's icon (as well as the other icons and windows) are positioned on the Desktop the way you want them, then choose SAVE DESKTOP from the OPTIONS menu. (See Chapter 6 for more on saving the Desktop.)

A MISSING DESKTOP.INF FILE

QUESTION: I've done all that, but I still have a problem. After installing my RAM disk's icon and making sure my boot disk is in drive A, I choose SAVE DESKTOP. However, when I reboot, the RAM disk's icon isn't on the Desktop.

ANSWER: Try again. This time, after choosing SAVE DESKTOP, open the window to your RAM disk. You may find that the DESKTOP.INF file has been sent there, instead of to drive A. If so, copy the DESKTOP.INF file from your RAM disk to your boot disk in drive A.

Although the SAVE DESKTOP procedure usually sends the DESKTOP.INF file to drive A, I've run across a few RAM disks which cause the file to be sent to the RAM disk itself. If you're unsure about which is the latest version of the DESKTOP.INF file, make sure your system clock is set properly, then note the time and date at the moment you perform SAVE DESKTOP. Then compare these with the time and date of the DESKTOP.INF file on your boot disk.

USING AN AUTO FOLDER

QUESTION: I've installed the RAM disk icon, performed SAVE DESKTOP, and run my RAM disk program. But if I turn the computer off, the next time I turn it on again and double-click on the RAM disk's icon, I still get the message, "The drive you specified does not exist."

ANSWER: A RAM disk is just like any other program: it needs to be run every time you want to use it. However, since you're probably going to be using a RAM disk on a regular basis, it's the perfect type of program to be run automatically from within an AUTO folder.

To do this, create an AUTO folder on your boot disk, then copy your RAM disk into it. (See Chapter 4.) Thereafter, every time you power up with that boot disk, your RAM disk will automatically be run. Just make sure the DESKTOP.INF file containing the RAM disk's icon installation is also on that boot disk.

RAM DISKS AND RESOLUTION CHANGES

QUESTION: If I change from low to medium resolution (or vice versa) will the contents of my RAM disk be lost?

ANSWER: No, not if you're using a "reset-proof" RAM disk such as YARD.PRG. But if you're using a non-survivable RAM disk, everything will be lost.

USING AN AUTO-LOADER

You may find, as I did, that you habitually copy into your RAM disk certain programs or files. I found, for instance, that I'm constantly loading my word processor into the RAM disk. When I discovered there were programs that would do this for me automatically, I wanted one. And when I found out that they were free, I wanted one immediately.

These programs are called auto-loaders. They automatically load (i.e., copy) files, folders, programs, etc., into your RAM disk whenever you boot up. I presently use ULTCOPY.PRG, but there are other good PD auto-loaders, too. (Chapter 11 covers where you can acquire PD software.)

MISCELLANEOUS NOTES

1. If you have a RAM disk which allows you to adjust its size (i.e., the amount of RAM that will be allocated to it) don't create a RAM disk that is too small. 100k is probably the smallest size you should try.

2. On the other hand, don't make your RAM disk too big. You'll probably want to leave yourself at least 100k of free memory in order to run programs. The actual RAM disk size that you choose should be determined by how large a system you have (520, 1040, Mega) and how many desk accessories you have.

3. If you've loaded a RAM disk, but now want to free up that memory, you'll probably have to turn off the computer. In other words, there's usually no easy way to remove a RAM disk short of powering down. Note that a RAM disk is *not* removed by merely choosing INSTALL DISK DRIVE and clicking on REMOVE. All that does is remove the RAM disk's icon; the program remains in memory.

4. Do *not* try to format a RAM disk, since this might damage the floppy disks in either drives A or B. Instead, if you want to empty your RAM disk, draw a rubber-band around the file icons, then drag them to the Trash Can (or [Shift]+[Click] on each file, if they're displayed as text). In fact, you may be surprised at how quickly the deletions occur.

5. The March 1987 issue of *Current Notes* (page 52) contains an excellent article which compares nine RAM disks and six auto-loaders.

* * * * * * * * * * * *

Rather than take up a whole page at the beginning of the book for the dedication, as is customary, I've decided to use this space to dedicate this book to my mother and father.

I'd also like to thank the nice folks at Index Legalis for publishing *The Atari ST Book.* Their acceptance of the manuscript was in marked contrast to the discouraging rejections from New York publishers that I received for one of my previous books, *Multi-tasking Systems on the Timex-Sinclair 1000.* One of the rejection letters was particularly cruel: "Dear Mr. Turner, " it said. "Your *Multi-tasking* book is both good and original. Unfortunately, those parts of it which are good, are not original, and those parts which are original, are not good."

CHAPTER TWO

FILES AND THEIR MANAGEMENT

What are wild cards, pathnames, and root directories, and more fundamentally, do you really need to know about them? After all, isn't one of the advantages of the ST the fact that you can use the computer without knowing much more than how to operate the mouse?

Well, yes and no. It's true that you can navigate the ST without having to know a lot of complicated things. Just mouse-click on a program's icon, and away you go. But sooner or later, situations will arise which require a more sophisticated knowledge. In order that you'll be prepared, we're now going to learn a few things about files.

Your computer stores data on disks (floppy disks, RAM disks, or hard disks), and this data is organized into files. A file is an organized collection of related data.

TWO TYPES OF FILES: DATA FILES & PROGRAMS

There are two different types of files: data files and program files. Program files are sometimes called applications, application programs, or executable files, but more often they're merely called programs. Similarly, you may hear someone refer to a data file as a non-executable file or a document.

What's the difference between a program and a data file? Programs *do* things, while data files contain information that can be *used* by programs. To make a program do whatever it's designed to do, you double-click on it from the Desktop. Double-clicking on a program is called running, loading, executing, or opening it.

When you run a program, the information in the program instructs the computer to perform certain tasks. For instance, running 1ST_WORD.PRG displays the word processor's editing screen and

allows you to create documents. The documents created in 1st Word (such as TURNER.DOC) are data files.

Whereas you can run a program, you can't run a data file. In order to use a data file, in general you first have to run a program, then call up the data file from within the program. (An exception: you may be able to display a text file, which is one kind of data file, by double-clicking on it from the Desktop.)

TYPES OF PROGRAMS

In Chapter 16 we'll be discussing the types of programs in detail, so for now it'll suffice to know that files with the following extensions are programs: .APP, .PRG, .TOS and .TTP. Files with any other extensions are data files.

FILES AND FOLDERS

In the same way that an office's file cabinets can contain folders which hold documents, the ST's disks can contain folders which hold files. A folder is merely a device which allows you to segregate a disk's files into different groups. IBM computers have folders, but they're called subdirectories.

You don't really *need* folders; they just make accessing and managing your files easier. For instance, if you have sixty files on a disk, but no folders, it may take some scrolling and hunting in order to locate a particular Degas-created picture file. But if those sixty files are divided into groups of similar files, and each group is in its own folder (one of which is a folder called DEGAS.PIC), it's not going to be so hard to find your particular file.

ROOT DIRECTORY

When you double-click on one of your disk drive's icons from the Desktop, the box that opens up displays that disk's letter designation (such as A:\, or B:\, etc.). This box is called, in ST jargon, a window. But it could also be called the root directory for that particular disk. It is the *root* directory in that it is that disk's first, or main, directory. But a disk can also contain folders, and if it does, these folders will branch off from the root directory. When a disk contains folders, the windows for the folders will be accessed by first opening the disk's main window, or root directory.

FOLDERS WITHIN FOLDERS

Not only can you put files into folders, but you can also put folders into folders. You can create folders which branch out from a disk's root directory, or folders which branch out from other folders. This branching out of folders creates a kind of tree structure. (See Figure 2.1.)

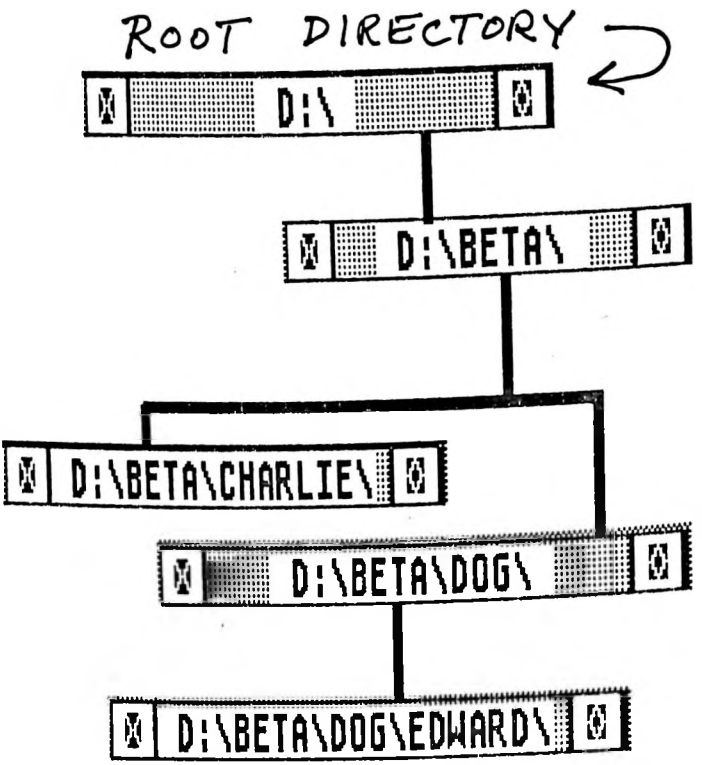

Figure 2.1

The disk depicted in Figure 2.1 contains folders CHARLIE and DOG, which are inside folder BETA, and folder EDWARD, which is inside folder DOG. In order to access a file that is inside folder EDWARD, you'd have to mouse-click on the disk's icon, and when

the first window (the root directory) pops up, mouse-click on folder BETA, then folder DOG, then folder EDWARD, and finally on the desired file.

If this sounds inordinately complicated, don't worry. It isn't. The ST's mouse, along with its GEM interface, makes moving around complicated disks quite easy. Just be glad you don't have one of the millions of computers that requres you to type out the names of each folder and file correctly in order to access them.

MOVING IN AND OUT OF FOLDERS

Look at Figure 2.1 again. From the Desktop, if you want to display the root directory, simply double-click on the disk's icon. Similarly, to display BETA folder's directory, double-click on its icon (or its name, if you've chosen to display names rather than icons). To close BETA folder's directory window in order to see the root directory's window again, either mouse-click on the window's close box, or choose the CLOSE option from the FILE pull-down menu.

In other words, clicking on CLOSE closes the present window, but *doesn't* close the window of the "parent" folder which contains the presently displayed window.

****

SHORTCUT

However, let's say the directory for the EDWARD folder is displayed, and you want to return to the Desktop. You don't need to go through, and close, each previous folder in the tree structure. Just choose CLOSE WINDOW from the FILE pull-down menu, and you'll find yourself at the Desktop. In other words, CLOSE WINDOW closes not only the active window, but also any "parent" windows that the active window may have.

****

You can put a folder in a folder in a folder, etc., until you've created a tree structure many layers deep. But don't go overboard. Although using folders may make file access easier, this is true only to a certain degree. You'll soon reach a point of diminishing returns, since the more levels of folders you have, the more windows you'll have to open in order to find a file.

FILE NAMES

Each file on a disk has a name. A name consists of three parts: the filename proper, a period that serves as a separator, and a filename extension. The extension is often referred to as the extender or the file type.

The filename proper consists of at least one, and as many as eight, characters. The characters can be letters of the alphabet, numbers, and the underline character. However, a file name can't include spaces, punctuation marks, or any symbols. (If you want two words to constitute a filename proper, use the underline character to separate the words.) It doesn't matter whether you type in a file name's alphabetic characters as upper or lower case, since the name will always be saved as upper case.

Here are some acceptable filenames proper:

DOCUMENT
RALPH1
3
T
DRAFT_1

FILE NAME EXTENSIONS

The file name extension is an optional addition to the filename proper. In other words, although a file name *must* have a filename proper, it doen't have to have an extension.

Here are some examples of acceptable file names with extensions:

COMPUTER.DOC
TURNER.DAT
1.87
RALPH.T
MAY_87.TXT

Note that a filename proper can consist of less than eight characters, even when it's followed by an extension. After typing in the filename proper, the act of typing a period will cause the cursor to jump to the period's position. Then type in the extension.

Here are some examples of improper file names, with explanations of what's wrong with them:

TOM,2.DOC	(punctuation not allowed)
MY_FIRST_STORY.DOC	(more than eight character in filename proper)
BOOK.P127	(more than three characters in extension)
TOM TWO.TXT	(space not allowed)
RALPH#.BAS	(illegal character; only letters or numbers allowed)

CHOOSING FILE NAME EXTENSIONS

File name extensions are used in order to indicate the category and classification of the file. Extensions allow you to quickly and easily determine the purpose of a file.

You can give a file name any extension you want, but don't give a data file one of the extensions which is reserved for programs, such as .PRG, .TTP or .TOS. Additionally, by convention there are some extensions which are almost always used to indicate a particular use. The most common are:

.APP	a GEM program file
.BAS	a BASIC program - (run BASIC first, then load the file)
.C	a source code file in C language
.DAT	a data file created or used by an application
.DOC	a document or text file, often used by word processors
.GEM	a GEM data file
.LOG	a LOGO program - (run LOGO first, then load the file)
.NEO	a NEO-Chrome picture file - (to display, run NEO-Chrome)
.RSC	a Resource file for a GEM program
.PRG	a GEM program
.SYS	a System file used by the ST
.TOS	a TOS program
.TTP	a TOS takes parameters program
.TXT	a text file, often in ASCII, which you might be able to view from the Desktop

It's useful to assign extensions to your files in a systematic manner. For instance, if you write many letters, you might want to give all of them a .LET extension. Alternately, you could include the day of

creation in each letter's extension. Thus, if you wrote a letter to Mr. Smith on December 15th, you could name the file SMITH1.215.

Why do this, you might ask, when the ST automatically records the file's creation date when it saves the file to disk? Well, the automatically-recorded date is usually observable only from the Desktop, which doesn't do you any good once you're inside an application and the Item Selector box pops on the screen. If, however, your extensions include dates, you'll easily be able to retrieve, for instance, the latest version of a letter to Mr. Smith, if you've named the files SMITH1.215, SMITH1.217, etc.

I use another method in order to simplify the retrieval of some of my files. I write reviews of different word processing programs, and since one word processor's data files often aren't compatible with another word processor, I need an easy way to know which word processor created a particular file. Therefore, all my files for Regent Word have as the first letter of their extension the letter R; those from TextPro have extensions starting with T; and so on.

PATHS

Sometimes you run across a program (for instance, a .TTP program) which will require you to type in the name of a file, as contrasted with just double-clicking on the file's icon or file name.

Here's an example. Many public domain programs are in squeezed, "arched" form. They need to be de-arched before they can be used. To de-arch a file, you use a de-arching program such as ARCH.TTP. But when you double-click on ARCH.TTP in order to run it, a dialog box appears which prompts you to type in the name of the file you want de-arched.

Now, you might think that typing in the name of a file would be easy. And it will be, if both ARCH.TTP and the target file are on the same disk. But what if ARCH.TTP is on one disk, and the target file is on another? Or what if the target file is in a folder? In either case, supplying the name of the file will involve a bit more than merely typing in the file name. You'll need to provide the file name's path.

A path (sometimes called a pathname) consists of the name of a file, as well as the file's location. The best way to understand this is to look at Figure 2.3. In this figure, the file called RALPH.DOC is in the folder called DOG, which is itself in the folder called BETA, which is on the disk in drive A.

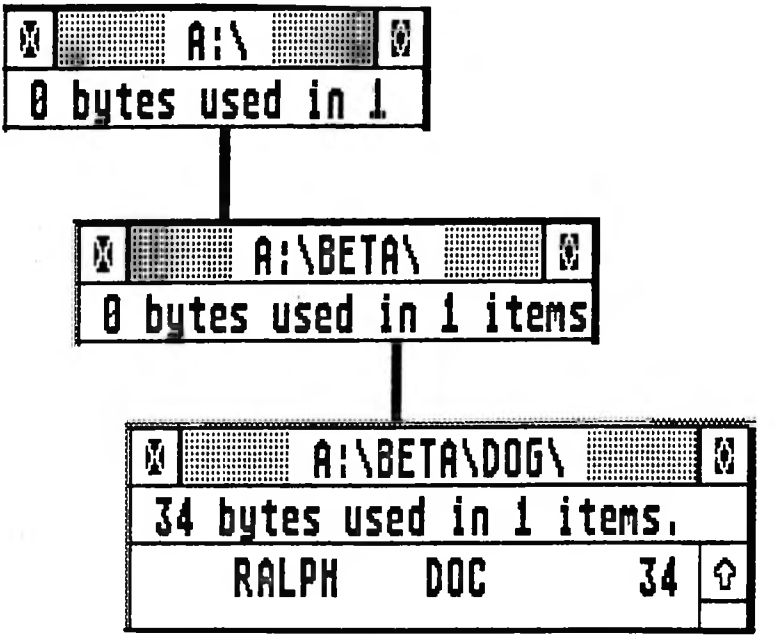

Figure 2.2

The pathname for the RALPH.DOC file is:

A:\BETA\DOG\RALPH.DOC

When you designate a path, you have to do it in a prescribed manner. The required format for a TOS pathname is:

[<drive>:] \][<folder>][\<folder...>][\][<file>][.<ext>]

In designating the pathname of a particular file, the following rules must be observed:

1. drive - Insert here the letter of the disk drive which contains the file. If no drive is specified, the current ("default") drive will be used. When a drive *is* specified, the drive letter must be followed by a colon (:).

2. folder - Insert here the name of the folder which contains the file. If one folder is inside another folder, each folder's name must be separated by the backslash character (\). If the first folder that's specified in the path is preceded by a backslash, then your path will start at the root directory of the drive; if it's not, then any specified folders are relative to the current folder. If you don't specify any folder, then the current folder will be used.

3. file - Insert here the name of the file, which can consist of up to eight characters. If you've specified a folder, then you must insert a backslash between the name of the last folder and the filename.

4. ext - If you want, you can insert here a file extension, which can consist of up to three characters. If you choose to use an extension, you then must use a period (.) between the filename proper and the extension.

WILD CARDS

Sometimes we want to specify a file name in such a way that more than one file will match our specification. Let's say we want the ARCH.TTP program to de-arch three different files. Instead of processing each file individually with ARCH.TTP (and thus running the program three different times), we might be able to use a wild card and run the program only once.

To understand computer wild cards, think of the use of wild cards in card games. There, a wild card is a card which can represent *any* card. Similarly, there are two computer-file wild cards which can represent any character.

The two computer wild cards are the question mark (?) and the asterisk (*). The question mark can represent any *one* character, while the asterisk can represent *any number* of characters (from one to eight characters in a filename proper, and from one to three characters in an extension).

USING THE QUESTION MARK WILD CARD

The question mark is wild for the one character position it occupies in the file name. Let's assume that there are three files that we want ARCH.TTP to unsqueeze:

TURNER.1RC
TURNER.2RC
TURNER.3RC

In order to instruct ARCH.TTP to de-arch all three files at once, all we do is tell it to process TURNER.?RC. In other words, the question mark will yield a match with any letter or any number, but only for the particular position that the question mark appears in. In this case, the question mark appears in the first space of the extension.

Similarly, if we tell ARCH.TTP to de-arch LETTER?.DOC, the following files will be unsqueezed:

LETTER1.DOC
LETTER2.DOC
LETTERZ.DOC
LETTER_.DOC

Note that the use of a wild card will produce the desired result only if the rest of the positions of the file name (which aren't represented by wild cards) match exactly. For instance, in the example above where we specified LETTER?.DOC, neither BETTER1.DOC nor LETTER1.TXT would match.

USING THE ASTERISK WILD CARD

The asterisk wild card can be thought of as shorthand for a number of question marks. When used, it is wild from the character position it occupies in the file name, to the end of the filename proper or to the end of the extension. Put another way, the asterisk is treated as if there were as many question marks as there are characters remaining in the filename proper or in the extension. Let's look at some examples.

If we specify *.DOC, then any file with a .DOC extension would match, including:

STWRITER.DOC
README.DOC
123.DOC

Similarly, if we specify STWRITER.D*, the following would match:

STWRITER.DOC
STWRITER.DAT
STWRITER.DBA
STWRITER.DO

Note finally that an asterisk appearing only in the filename proper, without another asterisk also appearing in the extension, does not act as a wild card in the extension.

USING THE QUESTION MARK AND THE ASTERISK TOGETHER

Both of the wild cards can be used together. To demonstrate, let's say that whenever you name a file having to do with the SMITH family business, you type SMITH, followed by a number (which represents a year) followed by a letter (which represents some aspect of the business, such as taxes or payroll) followed by an extension (which represents what kind of file it is - DOCument, TEMplate, LETter, etc.). For example, if you wrote a letter that dealt with 1987 taxes, you would name the file SMITH7T.LET .

Now, by specifying SMITH?T.*, you could cause the ST's Item Selector to display all the tax files, for all years, regardless of whether they were documents, letters or templates. The following files would match:

SMITH5T.DOC
SMITH6T.LET
SMITH4T.TEM
SMITH7T.DOC

THREE WAYS TO RENAME A FILE

GEM provides three different ways to change the name of a file.

1. The most straightforward method is to mouse-click once on the file from the Desktop, then choose SHOW INFO from the FILE menu. An ITEM SELECTION box for that file will appear, with the cursor positioned on the NAME field. Use [Esc], [Backspace], [Delete] and the arrow keys to alter or replace the name of the file, then press [Return] or click on the OK box to actually make the change.

   Although you can change a file's name to anything you want, if you change the file extension, you may, in some situations, create confusion. For instance, if you change 1ST_WORD.PRG to 1ST_WORD.DOC then double click on the new file name, the program won't run; you'll merely be presented with the SHOW-PRINT-CANCEL dialog box.

   In fact, you won't be able to get a program to run unless it has a .PRG, .TTP, .APP or a .TOS extension.

In the same way, changing the extension of a non-program data file to one of the four program extensions will not turn it into an executable program. Instead, it will probably result in a crash.

2. The name of a file can also be changed during a copy operation. When the NAME CONFLICT DURING COPY box appears, the copy of the file can be given a new name.

3. It is also possible, through the use of a "SAVE AS..." option within certain programs, to rename a file that you've been working on.

   For instance, you might want to use your word processor to create a template with your letterhead on it. Whenever you wanted to wirte a letter, you'd load the template, write the body of the letter, then give the file a new name with the SAVE AS... function. This would save the new file without writing over the template.

RENAMING FOLDERS

Although GEM provides no way to easily rename a folder once it's been created, you can create another folder and give it your new name, then copy the files from the old folder into it before trashing the old folder.

This same method of "renaming" a file can be accomplished a bit more easily from within the Universal Item Selector (described in Chapter 3).

A TIP FOR NON-GEM PROGRAMS

Most GEM programs display the name of the current file at the top of the screen, usually as part of the window's Move Bar. Because of this, there's never any question about what file you're presently working on.

However, some programs, usually of the non-GEM variety, don't display the file name. In these programs you might want to type in the file name as the first line of text in the file. Not only will this tell you what file you're working with, but any printed hardcopy will also be immediately identifiable.

MISCELLANEOUS ITEMS

1. Wild cards are sometimes called "global filename characters," or "generic file names."

2. Specifying *.* is the same as specifying ????????.???, and will give a match for all filenames proper and all extensions.

CHAPTER THREE

USING THE ITEM SELECTOR

Being able to use the ST's Item Selector is just as important as being able to shift gears in a car, since the Item Selector is really just a transmission for your ST.

The Item Selector is used every time you want to load, save, merge, create or delete a file from within most GEM programs. Its purpose is to allow you to choose *which* file, out of the many files that may be available to the computer, you want loaded, saved, etc. The box provides an easy way of giving the computer an instruction such as, "Load the file named 'JONES.DOC,' which is located on drive A in the folder called 'LETTERS.' "

I'll start out by describing how to use the GEM Item Selector that came with your ST, but don't get discouraged if its use sounds complicated. First, it isn't as difficult as its description makes it sound. Second, later on in this chapter in the section called "Replacing the Item Selector," I'll mention how an inexpensive piece of software can simplify file retrieval significantly. But for now, let's proceed with the standard Item Selector.

If you look at Figure 3.1, you'll see that there are three main areas in the Item Selector: the Directory Line, the Selection Line, and the Directory Window. Before we discuss each of these areas, let's get a quick overview of the steps involved in using the Item Selector.

THE ITEM SELECTOR IN A NUTSHELL: HOW TO LOAD A FILE

1. Make sure that the disk drive that's listed on the Directory line is the drive that contains your desired file. If it isn't, edit the Directory Line as required.

2. After editing the Directory Line, click once on the Move Bar of the Directory Window. This will cause the Directory Window to

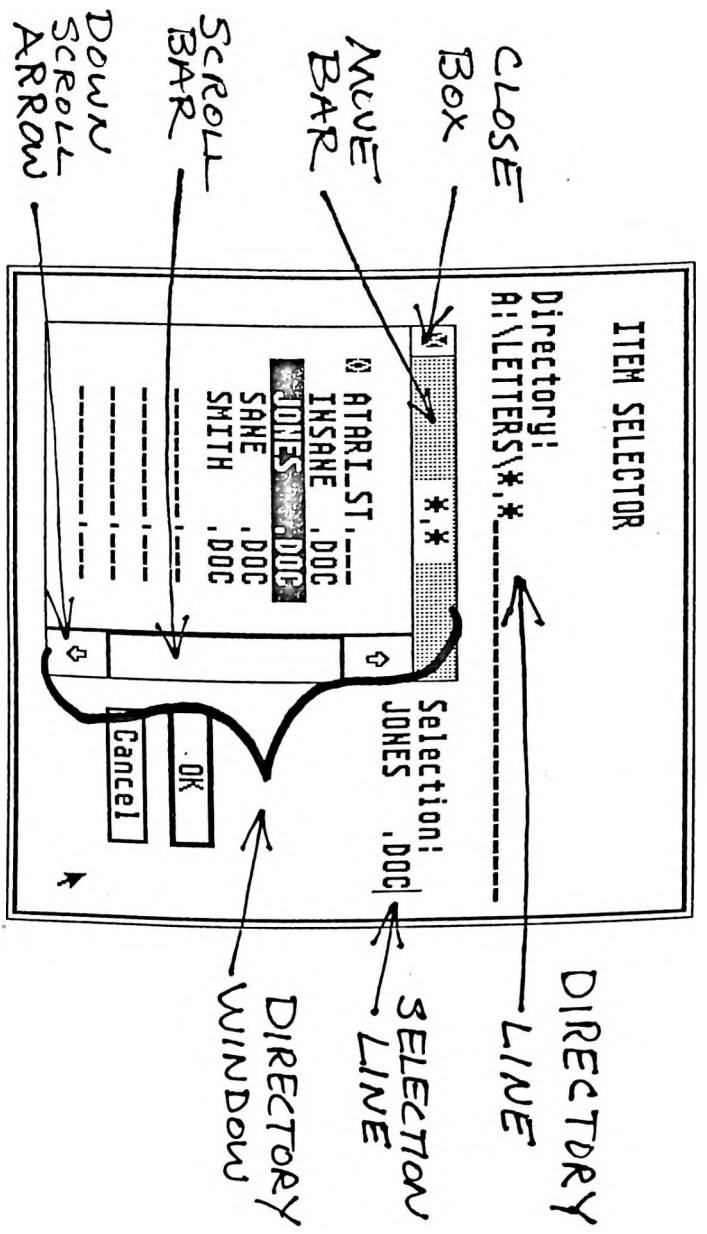

Figure 3.1 - The standard Item Selector

be updated so that it displays all the files and folders within the new Directory Line's path.

4. Look in the Directory Window to find the file you want. If you don't see it listed, try mouse-clicking on the down scroll-arrow, or on a folder, in order to display more files.

5. Once you see the file you want, double-click on it. Your file will be loaded.

Note that once you've edited the Directory Line (Step # 1), you do *not* click on "OK", as this will close the Item Selector box altogether.

As we will see, a relationship exists between the three main areas of the Item Selector: what appears on the Directory Line will determine what can be viewed in the Directory Window, and what you choose in the Directory Window will appear on the Selection Line.

THE DIRECTORY LINE

Every time the Item Selector appears on your screen, there will already be a pathname on the Directory Line. Often, this default pathname will already be the way you want it, and you therefore won't need to change it. When this happens you can proceed to search the Directory Window for a particular file or folder.

Other times, however, you will need to alter the pathname on the Directory Line. This is because, on these occasions, if you didn't change the pathname, the file or folder you wanted wouldn't appear in the Directory Window, and therefore you wouldn't be able to select it. For example, you'd have to alter the pathname if B:*.* appeared on the Directory Line and you wanted to load a file that was on drive A.

In other words, whether you can leave the Directory Line's default pathname the way it is will depend on what the default pathname is, and where your desired file is located. If you want a file that's located on a drive other than the drive listed on the Directory Line, you'll have to change the Directory Line.

Since the pathname that is on the Directory line determines which file names and folders get displayed in the Directory Window, when we change the pathname on the Directory Line, different file names and folders will appear in the Directory Window. For example, if the Directory Line path reads A:*.*, then all the files and folders on the disk in drive A will be available for view in the Directory Window; but if we change the Directory Line pathname to B:*.*, then only

those files and folders on the disk in drive B will be available in the window.

EDITING THE DIRECTORY LINE

The first step in editing (i.e., changing) the Directory Line is to move the cursor up to the Directory Line. The cursor is a thin vertical line, and it is always found on the Selection Line when the Item Selector box first appears on the screen. To move the cursor up to the Directory Line, either mouse-click on the Directory Line, or press the [Up] arrow key on the keyboard. (To return the cursor to the Selection Line, either press the [Down] arrow key, or mouse-click on the Selection Line.)

There are a number of ways to edit the Directory Line. You can: start backspacing immediately, then type over the erased spaces; use the [Left] and [Right] arrow keys to position the cursor, then use the [Backspace] or [Delete] keys; or press [Esc], which will erase the whole line in one stroke.

Editing the Directory Line is necessary in two situations, and not necessary in a third. It's necessary when you need to change the drive letter, or when you want to change the three-letter extension so that only certain files will be listed in the Directory Window. Editing the Directory Line is *not* necessary when you merely want to cause a different folder to be displayed in the Directory Window. This is most easily accomplished by mouse-clicking on a folder in the Directory Window.

Now for some specific suggestions. Let's assume you've just opened the Item Selector and the default path is B:*.*. However, you want a file that's on drive A.

DIRECTORY LINE SHORTCUT

Here's an easy way to change the Directory Line to A:*.*:

1. Mouse-click on the Directory Line.
2. Press the [Esc] key.
3. Mouse-click anywhere on the Move Bar of the Directory Window. A:*.* will appear on the Directory Line. [See Figure 3.1 for location of the Move Bar.]

This shortcut, in other words, allows you to enter six characters (A:*.*) without pressing any keys! Note, too, that although I've used B:*.* as the default pathname we wanted to switch from, this shortcut will work no matter what your default pathname is.

But what if you want to access a file on drive B?

ANOTHER DIRECTORY LINE SHORTCUT

To change the Directory Line to the B drive (or to any other drive):

1. Mouse-click on the Directory Line.
2. Press the [Esc] key.
3. Type B: (or the letter of any other drive you want).
4. Mouse-click anywhere on the Move Bar of the Directory Window. B:*.* will appear on the Directory Line.

Although this shortcut eliminates the typing of only four characters (*.*), it's still a lot easier to press two keys (B:) than six (B:*.*) every time you want to access a new drive.

FILE TYPES AND THE DIRECTORY LINE

So far, we've concerned ourselves with how to change drive letters and folders on the Directory Line. Now let's cover file types.

If the default pathname on the Directory Line ends with an asterisk (*), there will be times when you'll want to replace the asterisk with a three letter extension. By doing this, you may be able to make the job of looking for a particular file in the Directory Window a lot easier.

For instance, let's say you want to load a 1st Word printer driver into your word processor in order to customize it for a particular printer. If the last part of the Directory Line's pathname is *.*, you may be confronted with a great number of files, of all sorts, in the Directory Window. There may be desk accessories (.ACC), documents (.DOC), backup files (.BAK), programs (.PRG), etc., and it may be difficult to weed through them all.

But if you replace the last asterisk in the Directory Line pathname with the letters HEX (making the Directory line B:*.HEX), the only

files that will appear in the Directory Window will be the printer drivers, which all have .HEX extensions. You'll be able to find the file you want very easily.

Similarly, if you want to load into your word processor a file that you gave a .DOC extension to when you created it, and that file is now in the A drive, try editing the Selection Line so it reads A:*.DOC.

IMPORTANT TIP

Once you've changed the file type on the Directory Line, *don't* mouse-click on the Move Bar, as this will give you an erroneous update in the Directory Window. Instead, mouse-click in the white area just below the Move Bar.

WHATEVER YOU DO, DON'T...

There's a bug in the ST's operating system, which, if you're not aware of it, might prove dangerous. If you press [Shift]+[hyphen] at any time that the Item Selector's cursor is on the Directory Line, your system will crash. Pressing [Shift]+[hyphen], of course, is what you do whenever you want the underline character to be typed, but you should never try to put this character on the Directory Line. If you do, ten little bombs will appear on the screen and you'll have to boot up again. All data that's in your computer's memory will be forever lost.

THE DIRECTORY WINDOW

Both files and folders are displayed in the Directory Window. The names of folders will be preceded by a rectangle with a diamond inside it, but the names of files won't have this symbol in front of them.

If you want to see what files are inside a folder, mouse-click once anywhere on the folder's name, and the files will be displayed. (Note that not all programs will allow you to do this.) To return to the parent directory (i.e., to close the folder) click on the close box in the upper left-hand corner of the Directory Window.

If there are more files and folders than can be viewed in the Directory Window's eight lines, use the scroll bar on the right (or the up and

down scroll arrows) to see the other files. Once you see the file you want, double click on it, and it will be loaded, saved, etc.

THE SELECTION LINE

The Selection Line is used to name a new file that you want to create, or to save a previously saved file under a new name. Let's examine this latter situation.

Suppose you've created a document in your word processor which you saved as MOM.DOC. Sometime later you make some changes to this document, and you'd like to save both the original and the changed versions. What you *don't* want to do is save the newer version as MOM.DOC, because in the process of saving it your word processor will overwrite (and thus destroy) the earlier version.

So, when you give your word processor the command to save this newer version, (and the Item Selector pops up) *don't* double click on MOM.DOC in the Directory Window. This would immediately replace the original MOM.DOC with the new version. Instead, mouse-click on MOM.DOC once, which will put its name on the Selection Line. Now either change the name on the Selection Line to something slightly different from MOM.DOC, (such as MOM2.DOC), or press the [Esc] key and give it a totally new name. (The same editing maneuvers that work on the Directory Line - pressing [Esc], [Backspace], etc. - will also work on the Selection Line.)

QUESTION: The file I want isn't displayed in the Directory Window. What do I do?

ANSWER: The Directory Line path may be too restrictive. For example, B:\LETTERS*.DOC restricts the listing to only .DOC files that are located in the LETTERS folder. Try making the path more comprehensive - for example, B:*.*. Or maybe you're looking on the wrong disk. If so, read the next tip.

SWITCHING FLOPPIES PROBLEM

QUESTION: When I load the 1st Word word processing program, the Item Selector automatically pops up on the screen. If I want to load a file that's located on the same floppy as 1st Word, I have no problem. But when I insert another floppy into the drive to load one

of its files, I can't get the Item Selector to display this new disk's files.

ANSWER: Mouse-click on the Close Box and the Directory Window will be updated.

BE CAREFUL WITH THE ITEM SELECTOR!

The Item Selector can be dangerous! When it opens, it doesn't tell you *what* it's going to do with the file you select. In other words, the Item Selector looks exactly the same, whether you're choosing a file to be saved, or deleted, or whatever.

This means, for instance, that if you mistakenly chose the DELETE function from within a program (when you really meant to choose the SAVE function) you won't notice your mistake from the appearance of the Item Selector box. Moreover, unlike the desktop operation of putting a file into the Trash can, there is no warning message that appears and asks if you really want to delete the file.

Therefore, if there's any doubt in your mind about what the Item Selector is going to do with your file, mouse-click on CANCEL and call up the box again.

REPLACING THE ITEM SELECTOR

You can easily replace the GEM Item Selector with the Universal Item Selector (UIS, for short) from Application & Design Software. There are two reasons for wanting to doing this. First, the UIS is much easier to use than the GEM version. Second, it provides a number of functions that aren't available with the GEM Item Selector.

One of the things that make using the Universal Item Selector so easy is its "immediate-choice-of-drive" capability. As you can see in Figure 3.2, a column of boxes appears on the right-hand side of the selector box. In these boxes are letters that correspond to the disk drives you have. Changing from a display of the contents of one drive to that of another is a simple matter; all you do is mouse-click on the drive letter you want. This means that you no longer have to edit the Directory Line in order to change drives.

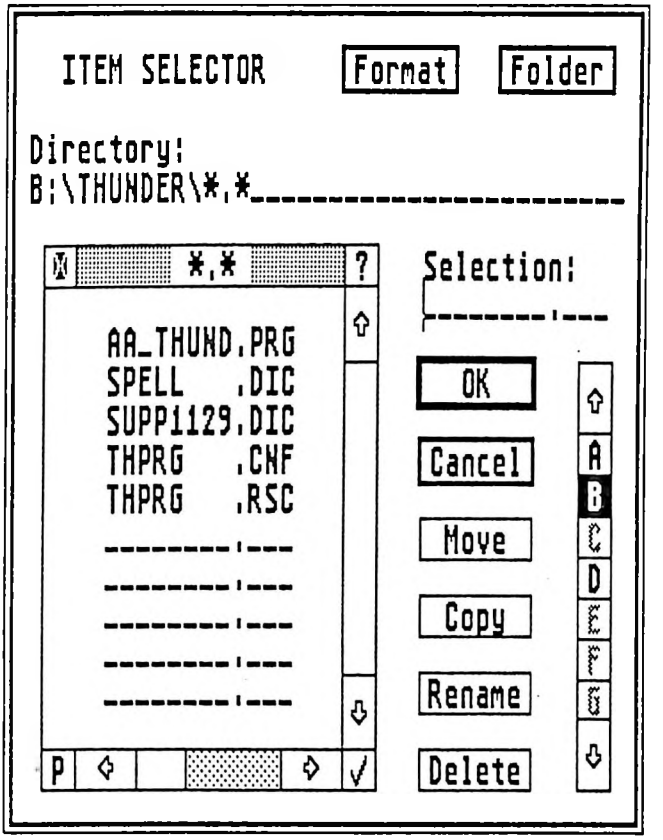

Figure 3.2 - The Universal Item Selector

This feature alone would make the program worth its price ($15.95). But in addition, the Universal Item Selector also adds, among other features, the ability to copy, move, rename, delete, format, lock and unlock files, and print out a disk directory. I particularly like the printout feature. Just click on the "P" box, and a list of all the files and folders on a disk will be printed.

The Universal Item Selector is software that can be loaded into memory manually from the Desktop, or automatically from within an AUTO folder.

MISCELLANEOUS NOTES

1. Some manuals refer to the Item Selector box as the "File Selector" or the "Selection Window." All of these terms refer to the same thing.

2. Sometimes there will be so many files and folders on a disk that it'll be very hard to use the Directory Window to find a file you want. (I have one disk that has multiple folders within folders, each containing many different files.) If you're using the Universal Item Selector, causing a printout of the disk's contents may be the quickest way to locate a file's whereabouts. If, on the other hand, you're still using the GEM Item Selector, you may want to exit the program you're in and use one of the public domain file-search or file-directory programs to locate your file.

CHAPTER FOUR

THE AUTO FOLDER

DEFINITION: An auto folder is a special folder created on your boot disk which automatically runs whatever programs are located inside it.

WHY USE THE AUTO FOLDER? The AUTO folder is a way of saving time and effort. If you find that you're repeatedly using a particular program - say a print spooler, or a RAM disk - you may be able to have the program executed automatically every time the ST is turned on. That will mean you won't have to double-click on the program each time you power up.

HOW TO CREATE AN AUTO FOLDER

1. Go to the GEM Desktop.
2. Insert into the A drive whatever disk you habitually have in your machine when you turn it on. (This disk is called your boot disk.)
3. Double-click on the Floppy Disk A icon to display its window.
4. From the FILE drop-down menu, click on NEW FOLDER. A box will appear, asking for the Name of the New Folder.
5. Type AUTO as the name of the folder, then press [Return], or mouse-click on the OK button. (Don't use an extender for the filename.) The AUTO folder is now created.
6. Drag into the AUTO folder the program(s) you want to have run automatically.
7. Now, whenever you power up with that boot disk in Drive A, the program(s) in the AUTO folder will be executed.

THE AUTO FOLDER'S MAJOR LIMITATION

Unfortunately, not all programs are capable of being executed from within an AUTO folder. Here are some rules about which programs will work, and which ones won't.

1. Any program which has GEM features can't be executed from the AUTO folder. In other words, if a program has windows, dialog boxes, drop-down menus, etc., it won't work. This means, for instance, that you can't automatically load 1st Word or ST BASIC. (However, see point # 4, below.)

2. For a program to be successfully run from the AUTO folder, the program must have a PRG extender. It can't have a TTP or a TOS extender. However.....

3. You may be able to run a TOS program from within the AUTO folder, provided it's the type of program that doesn't make AES or VDI calls. (If you're in doubt about a particular TOS program, give it a try. The computer's not going to be damaged if it's the wrong type of program.) If you are going to put a TOS program into your AUTO folder, change its extender from TOS to PRG.

4. There is at least one public domain program which allows you to run GEM-based programs from the AUTO folder. BOOTMAKER is one of these, and it's on the August 1987 monthly disk from *ST Informer* magazine.

MORE THAN ONE PROGRAM IN THE AUTO FOLDER

If you put just one program into the AUTO folder, then just that one program will automatically be executed. However, you can put a number of programs into the AUTO folder and each one, one after the other, will be executed.

For instance, on one of my boot disks I have an AUTO folder containing three programs: a SCRNSAVE.PRG; a program that creates a RAM disk; and ULTICOPY, which copies programs into the RAM disk.

THE "FIRST IN, FIRST OUT" RULE

If there is more than one program in an AUTO folder, the programs will be run in the order in which they were copied into the folder. That is, whichever program you copied into the AUTO folder first will be run first, whichever program you copied into the folder second will be run second, and so forth.

HOW THE AUTO FOLDER WORKS

When your ST is powered up, one of the first things it does is check to see if there's a folder named AUTO on the disk in drive A. This is done even before the system loads desk accessories, and before GEM is initialized. If such a folder is found, then any programs located inside it are executed, one by one. (The programs are called COMMAND.PRG files.)

It's because GEM hasn't been initialized when the search for the AUTO folder occurs that GEM programs can't be executed from the folder. If you *do* put a GEM program in the AUTO folder, the program will try to use GEM, but since GEM isn't available, the program will crash. You'll have to re-boot with a different disk.

LOCKUPS AND SUNDRY ANNOYANCES

Just like some of our friends, the AUTO folder is not always dependable:

1. Sometimes a particular program won't execute from within an AUTO folder. If it's one of a number of programs in the folder, try removing some of the other programs, one at a time, to see if that makes a difference. The more programs you have in an AUTO folder (using the ST's current version of the operating system) the greater the chance of problems.

2. There are some programs which just won't execute from within an AUTO folder, even if they're the only program in the folder.

3. The AUTO folder is unpredictable, sometimes causing the system to crash.

AUTO EXECUTION WORKS IN ALL THREE RESOLUTIONS

It's possible to auto-execute a program from the AUTO folder using any one of the three screen resolutions. However, if you want to auto-execute a program in medium resolution, make sure to have on the boot disk a DESKTOP.INF file which boots your system in medium resolution. If your boot disk doesn't have such a file, the system will default to low resolution and your program may not run. (See Chapter 6 for more on the DESKTOP.INF file.)

DIFFERENT BOOT DISKS WITH DIFFERENT AUTO FOLDERS

I've created a number of different boot disks, each with an AUTO folder containing different programs. The contents of each AUTO folder have been chosen to work with, and support, a particular application. For instance, when I want to use VIP Professional, the spreadsheet, my boot disk's AUTO folder loads a 400K RAM disk and a time-date setting program, but doesn't load my screensaver program, since it isn't compatible with VIP. When I want to do word processing, another boot disk's AUTO folder loads a 450K RAM disk, the screensaver, and ULTICOPY, which copies my word processor from my B drive into the RAM disk.

CHAPTER FIVE

COPYING

QUESTION: I tried to copy a file onto a disk but got a message saying, "This Disk does not have enough room for this operation." However, when I looked at the Information Line in the destination disk's window, the number of "bytes used" indicated that I *should* have had enough room for the file. (I calculated the number of bytes available by subtracting the window's number of bytes used from the number of bytes originally available on the disk.) What gives?

ANSWER: When a disk's window indicates that (for instance) "36,333 bytes (are) used", this does *not* mean that only 36,333 bytes of disk space have been used. All it means is that the files *in that window* have used 36,333 bytes. What this figure doesn't tell you is the number of bytes used by items contained in *folders* on that disk.

In order to determine how many bytes are used by the files in a folder, open the window for the folder and read the "bytes used' amount from that folder's Information Line. But remember, if the folder itself contains another folder, the "bytes used" figure for the parent folder won't include the files contained in the sub-folder.

QUESTION: So how do I know whether a disk has enough room for a particular file to be copied onto it?

ANSWER: Mouse-click once on the disk icon, then select SHOW INFO from the FILE Menu Bar and read the number of "bytes available."

Note: In a disk's SHOW INFO box, the number of "Bytes available" plus the number of "Bytes used" may not represent the exact amount of storage capacity for that disk. This results from the fact that the computer allocates fixed-size blocks of space for each file, regardless of whether or not the file fills up the last block. For instance, if you've created a small data file which is listed on its disk's window as consuming 74 bytes, it will actually be taking up 1024 bytes of disk space, which is the minimum space allocated to any file.

Before we proceed further, let's establish a couple of things regarding terminology. Copying usually (but not always) involves

two disks or folders. I choose to call the disk (or folder) *from which* you are copying, the SOURCE disk (or folder), and the disk (or folder) *onto which* you are copying, the DESTINATION disk (or folder).

USING A RAM DISK FOR COPYING FILES

If you have only one floppy disk drive, you really should have a RAM disk. In fact, a RAM disk is so useful in a number of ways that I think it should be one of the first programs that a new computer owner acquires.

Without a RAM disk, the single-drive owner will be subjected to the tedious "disk shuffle" whenever he wants to copy files from one disk to another. Using GEM's built-in routines to copy files requires a number of disk swaps, during which it's easy to make the mistake of inserting one disk when you mean to be inserting the other.

With a RAM disk, on the other hand, you'll only have to make one disk swap. Here's how to use a RAM disk to copy files from one disk to another:

1. Make sure your RAM disk is configured with enough RAM to hold all the files to be copied. Either use an adjustable RAM disk, or a large enough non-adjustable one.

2. Insert the SOURCE disk into your lone disk drive.

3. Open the windows for drive A and the RAM disk, then choose SHOW AS ICONS from the VIEW MENU.

4. Using the mouse, create a rubber-band around those files and folders in window A that you want to copy, then drag them to the RAM disk's icon.

5. Mouse-click on the RAM disk's window to make it active, then press the [Esc] key to update the window.

6. Create a rubber-band around the files and folders in the RAM disk's window and drag them to the icon for drive B. You'll be prompted to insert disk B (your destination disk) into drive A.

You've only made one disk swap, and the copying is done. And of course, one of the nicest things about RAM disks is that some of the best of them are in the public domain, and therefore are free.

COPYING DISKS WHEN YOU HAVE ONLY ONE DISK DRIVE

If you don't have a second disk drive, the easiest way to make a copy of a whole disk is to use a copy program such as Copy II ST (from Central Point Software) or ProCopy (from PROCO PRODUCTS). Even if the disk you need to copy isn't copy protected, using one of these programs is the easiest way.

All you do is run the copy program, then follow the prompts for inserting the source and destination disks. You have to insert each disk only once, which is a lot easier (and safer) than the multiple swaps required if you use GEM's copy routine (dragging icon A on top of icon B).

Although you can use a RAM disk to copy a whole disk, it's not as easy a method as using a copy program. If you do, however, use a RAM disk for copying, be aware of the following important rule: *never* drag a physical disk's icon onto the RAM disk's icon, or visa versa. It's all right, however, to drag a physical disk's icon onto the open window of a RAM disk, or to drag a RAM disk's icon onto the open window of a physical disk.

DOUBLE-SIDED TO SINGLE-SIDED, AND VICE VERSA

It's impossible to perform a disk-to-disk copy operation from a single-sided disk to a double-sided disk, or vice versa. In other words, you won't be able to drag one disk's icon onto the other disk's icon. To make a copy, use a destination disk that's of the same format as the source disk. Or alternately:

1. Open the window of the destination disk, then drag the source disk's icon onto the destination disk's window; or

2. Open the windows of both disks, then mouse-select and copy the items from the source disk's window and drag them to the destination disk's window.

MOUSE HINTS FOR SELECTIVE COPYING OF FILES

In order to copy files and folders, you'll want to become adept at *selecting* items from a window. Here are some tips:

1. Even if you normally prefer, as I do, to have the files in windows displayed as text rather than icons, you may want to temporarily change to the icon-display option if you're copying a large number of files. Do this via the VIEW Menu Heading from the GEM Desktop.

   There are two reasons for this. First, when files are displayed as icons, forty-nine files can be displayed on one screen. On the other hand, when files are displayed as text, only eighteen files are visible. So if you want to copy nineteen or more files, it'll be easier to do it if they're displayed as icons.

   Second, the selection of a number of files using the rubber-band method is a lot easier when the files are displayed as icons. Although the mouse *can* be used to draw a rubber-band around a group of files that are displayed as text, it's pretty difficult to position the mouse pointer so as to create the rubber-band, rather than merely selecting a file.

2. Use the "shift-plus-left-mouse-button" method. After you've selected and highlighted a file with the mouse, if you hold down the [Shift] key you can use the left mouse button to add files or folders to the file already selected. This method is useful for selecting a number of files which aren't displayed next to each other in a directory window.

   The shift/mouse method can also be useful in conjunction with the rubber-band technique of file selection. After you've highlighted a number of contiguous files using the rubber-band, you can add other files to this bunch, one at a time. Or if you've rubber-banded a group of files and would like one of them *removed* from the group, the shift/mouse technique can also be used. With the [Shift] key held down, the left mouse button acts as a toggle to highlight, or unhighlight, whichever file is under the mouse pointer.

COPYING FILES FROM FOLDER TO FOLDER

Here's how to copy a file from one folder into a second folder that's on the same disk:

1. Open two windows for the disk. In other words, double-click on the disk's icon, and when its window opens, double click on the icon again. After the second window opens, you may have to position it so as to provide access to both windows' folders.

2. Double-click on the source folder.

3. Drag the file from the source folder over to the destination folder.

The same technique can be used to copy a file from a folder on one disk into a folder on a second disk, or into the root directory of a second disk. This technique will also be necessary when you want to copy a file from the root directory of one disk into a folder on the same disk, and both items (the file and the folder) don't both appear in the window at the same time. This situation often exists when there are many files and folders on a disk.

COPYING BY PERFORMING A SAVE ACTION

Another method of making a copy of a file is to use the SAVE function from within a program.

Let's say that you're in a word processor and you've just completed writing an important term paper. By choosing SAVE from the Menu Bar (the method will vary depending on what word processor you have) you'll cause your document to be saved to disk.

If you now remove that disk and insert another disk and then perform another SAVE operation, the document will be saved to the second disk. You thus end up with two copies of the file.

WARNING: Although it's OK to switch disks *after* a copy operation is complete, you should never switch disks during the *middle* of a disk operation. For instance, if you instruct your word processor to SAVE a file to a disk that turns out to be write-protected, the SAVE operation will be halted and you'll get a dialog box. If you then insert another disk and tell the computer to "RETRY" the save operation, the file will be saved, but the disk

directory for the inserted disk will be damaged and the disk may end up unusable.

AUTOMATIC COPY PROGRAMS

There are a number of programs which carry out copying functions automatically. One that I often use is ULTICOPY.PRG, a public domain program which automatically copies the contents of a floppy disk onto a RAM disk at boot up. Written by David Duberman, this utility allows me to power up my ST, then turn away from the computer for a few minutes while I perform some other task. When I turn back to the ST, my word processor has been copied to my RAM disk, allowing me to immediately get to work. (See Chapter 11 for further information on ULTICOPY.)

COPYING WITH A DESK ACCESSORY

A number of desk accessories now exist which allow one to perform the standard Desktop functions (such as copying and deleting files, etc.) from within any GEM program. One of these DAs is DISKMAN.

Let's say, for instance, that you're in Degas (the drawing program), and you realize you'd like to copy a file from the disk in drive A to the disk in drive B. With the DISKMAN shareware program installed, a quick mouse ride up to the desk accessory Menu Heading will bring up a dialog box, from which you can perform the copy operation. (DISKMAN was written by Daniel Matejka, and is available from MichTron.)

DRAGGING DISK ICONS vs DRAGGING FILES OR FOLDERS & FRAGMENTATION

QUESTION: When I want to make a copy of a disk, is there any advantage to mouse-selecting all the files and folders on the source disk with the rubber-band technique, rather than merely selecting the icon of the source disk?

ANSWER: Yes. But to understand why, we first have to know about disk fragmentation.

When you delete a file from a disk, a gap is left where the deleted file used to be. If you later add or copy another file onto this disk which is larger than the original, deleted file, the new file won't be able to

fit into the existing gap. Part of the new file fills up the gap, and whatever is left will be put somewhere else on the disk.

This situation is called fragmentation. A fragment of the file is at one location on the disk, and another fragment is somewhere else. This results in slower disk access time. It takes more time for your computer to access a fragmented file than it does a non-fragmented file.

When you want to make a copy of a disk that's fragmented, if you perform the copy operation by dragging the disk's icon, the copy (i.e., the destination disk) will end up also fragmented. But if, instead, you rubber-band all the files and folders on the source disk with the mouse, then each item will be copied one at a time, and the source disk will not be fragmented.

However, to be honest with you, I personally don't think fragmentation of floppy disks is a particularly big problem. As a result, I never bother to go to the extra trouble of mouse-selecting each item on a disk.

DEALING WITH COPY-PROTECTED DISKS

Some commercial programs are copy-protected, which means that they've been made difficult, or impossible, to copy, or that some other method has been used to discourage copying.

It's understandable that software manufacturers resort to copy-protection. It takes a lot of money to develop and market good software, and a company's use of copy-protection techniques is a legitimate method to limit the theft of their software. However, whether copy-protection is prudent from a marketing standpoint is another matter, since it amounts to a serious annoyance to the user. In fact, some users now refuse to purchase a piece of copy-protected software, preferring to buy a competitor's program which isn't copy-protected.

Copy-protection methods vary. With some protected disks, it's difficult or impossible to make a copy that will run. The program may lock up your computer or allow you only limited access to the program's functions.

Another popular protection scheme allows a copy to be made, but when you use the copy, you're prompted during loading to insert the master disk. Once this is done, the master is removed and you can proceed. But this type of copy-protected software is disliked. Here's why:

1. It's annoying and time consuming to have to insert a master disk, then reinsert the copy.

2. Having to use a master disk every time you run a program is dangerous. A disk can be damaged by wear and tear, dust, heat, humidity, magnetic fields (including paper clips and scissors), mistreatment or accidental erasure.

3. Running the program from a hard disk may be difficult or impossible.

Ideally, you should use a master disk only once - when you make a backup copy of it. After that, it should be kept in a safe place and never used except to make another copy if the backup is destroyed.

If you buy software that *is* copy-protected, you should:

1. Purchase and use one of the so-called copy-protection avoidance programs, such as Copy II ST and ProCopy; and/or

2. See if a second master disk is available from the distributor of the program. Some manufacturers of copy-protected software allow registered owners to purchase a second copy of their program, often for as little as $10.00.

THE RAM DISK TRICK

I discovered an interesting thing about one of the copy-protected word processors I have. When I made a copy of it and ran the copy, the program bombed. Because I didn't want to have to use the master disk all the time, I ended up using the program very seldom, and disliking it. Then one day without thinking much about it, I copied the program onto my RAM disk, and lo and behold, the program ran! In other words, a copy of the program wouldn't run from a floppy drive, but would run from a RAM disk.

USING A COPY-PROTECTION AVOIDANCE PROGRAM

Copy-protection avoidance programs can be useful to:

1. Create working copies of copy-protected disks.

2. Copy non-protected disks, if you only have one disk drive. For those with only one disk drive, a copy-protection avoidance program can be as useful as a RAM disk. In fact, such a

program is preferable to a RAM disk when you also need to format the destination disk.

WARNING

Never try to copy a file from one desktop window onto the same window. If you do, you'll see the "NAME CONFLICT DURING COPY" dialog box, and at that point, make sure and choose "CANCEL." If you choose "OK" instead, the whole disk may be erased. (Note, too, that copying a file onto its own window can easily happen inadvertantly: When draging a file you might unintentionally let up on the mouse button before you're out of the window. If you do, just make sure to click on the "CANCEL" box.)

MASTER DISKS ONTO DOUBLES

Program master disks usually come on single-sided disks. If a program isn't copy protected and you've got a double-sided drive, you might want to copy the program (and any of its supporting files that you need) onto a double-sided disk. You'll then have some free space on the disk for other programs or data files.

MISCELLANEOUS NOTES

1. You'll get a "NAME CONFLICT DURING COPY" error message if you try to copy a file or folder to a directory that already contains a file or folder with that name.

   Once the dialog box appears, you can (1) cancel the copy operation; (2) click on OK, which will replace the existing destination file or folder with the source file or folder; or (3) enter in a new or altered filename. (The file will be copied and given its new name, and the file with the original name won't be replaced.)

2. Before making copies of important disks, whether they're program masters or disks containing important data, write-protect the source disk. In other words, make sure the small tab in the corner of the plastic disk is positioned so that you can see through the square hole in the disk. This will prevent you from mistakenly erasing material on the source disk. Although such a mistake is more likely to occur if you only have one disk drive, it *can* happen to those with two drives. Believe me, I know from personal experience!

3. When you're copying a whole disk onto another disk, or copying files onto another disk, the destination disk must be a formatted disk. This is why, for disk-to-disk copying, it's nice to use a special copy program which formats at the same time it copies.

4. If you are making a copy of a disk, be careful. A disk-copy operation will erase everything that's on the destination disk.

5. When you're copying files to another disk (or to another folder), you can either drag the files to the source disk's icon (or to the folder's icon), or you can drag the files to the window of the source disk (or to the window of the folder).

6. If you're like me, you may be annoyed by the prompt which appears every time you try to copy something. If so, you can choose SET PREFERENCES from the OPTIONS heading of GEM's Desktop and change Confirm Copies from Yes to No. However, I wouldn't advise doing the same thing for Confirm Deletes, since a mistaken delete can be disastrous, whereas a mistaken copy is more likely to be harmless.

7. It's possible for two or more files on the same disk to have the same name, provided they are in different folders, or one is in a folder and the other is on the root directory.

CHAPTER SIX

THE DESKTOP.INF FILE and THE CONTROL PANEL

QUESTION: Sometimes the Floppy Disk Icons and Trash Icon are in specific locations on the Desktop. Other times when I turn on the computer they're in different spots on the Desktop. Why?

ANSWER: The position of the icons on the Desktop, as well as the settings of a number of other variables, can be saved by choosing the SAVE DESKTOP option from the OPTIONS heading in the GEM Menu Bar. Once you've "Saved the Desktop" in this manner, a file called DESKTOP.INF is created. This file contains all the information needed to recreate the Desktop in its present, customized condition.

Thereafter, whenever you boot the computer with the disk containing this DESKTOP.INF file, the Desktop will appear in its customized condition. However, if you turn the computer on with a disk in drive A which doesn't contain this particular DESKTOP.INF file, the Desktop may be arranged differently.

Apparently, at times you have started up your system with a boot disk containing one DESKTOP.INF file, and other times you have used a boot disk containing a different DESKTOP.INF file. Or it may be that on occasion you've used a boot disk that didn't contain a DESKTOP.INF file at all. This would also bring about the situation you describe, since if there's no DESKTOP.INF file present on your boot disk, the computer will use its default settings. These default settings may or may not be the same as the settings contained in the DESKTOP.INF file.

WHY USE THE DESKTOP.INF FILE?

The purpose of the DESKTOP.INF file is to save you from having to reset all the Desktop variables to your liking each time you power up. It allows you to set things the way you want them, once, then

have those settings implemented automatically each time you start the computer.

CHANGING THE DESKTOP.INF FILE SETTINGS

The easiest way to change the DESKTOP.INF file settings is to use the mouse to set things up on the Desktop the way you want them. Before you do this arranging, though, boot your ST with a disk in drive A which contains the file named CONTROL.ACC.

The reason you want to boot with this file present is that only by doing so will you cause the Control Panel and the Install Printer desk accessories to be available from the GEM Desktop. It will be necessary to have these desk accessories available in order to easily set certain parameters that you'll want saved.

With these desk accessories installed, set up the Desktop the way you want it. Move the icons wherever you want them, make whatever selections you want in the Control Panel and Install Printer accessories, and so on.

When the Desktop is to your liking and with your boot disk in drive A, choose SAVE DESKTOP from the Menu Bar. This will cause a new DESKTOP.INF file to be written to the disk in drive A. Also make sure that a copy of the CONTROL.ACC file is also on your boot disk's root directory. From now on, every time you perform a warm or cold boot with this disk in drive A, the Desktop will be configured according to your settings.

DOES THE CONTROL.ACC FILE HAVE TO BE USED?

QUESTION: Why do I need a copy of CONTROL.ACC on my boot disk if the purpose of the DESKTOP.INF file is to eliminate having to make the Control Panel settings each time I boot up?

ANSWER: If you power up without CONTROL.ACC on your boot disk, none of the parameters saved in the first four lines of the DESKTOP.INF file will be used. (The first four lines contain the RS232 and printer settings, as well as all the settings you made from within the Control Panel.)

In other words, even though you went to the trouble of setting the colors to your liking, choosing an appropriate mouse click speed, etc., these changes won't be implemented unless you boot up every

time with the Control Panel desk accessory. (The settings contained in the remaining lines of the file *are* implemented even when CONTROL.ACC isn't present.)

WHICH VERSION OF CONTROL.ACC DO YOU HAVE

Before we proceed, it will be necessary to distinguish between two versions of the CONTROL.ACC file. The 520 and 1040 STs came bundled with a file called CONTROL.ACC, which in this section I'll refer to as CONTROL.ACC(old). The Mega STs also come bundled with a file called CONTROL.ACC, but since it's different from CONTROL.ACC(old), I'll refer to it as CONTROL.ACC(new).

Now let's consider the following:

1. If you have a 520 or 1040 ST (or for that matter, a Mega), whenever you boot with a disk containing CONTROL.ACC(old), two desk accessories will appear in the Desk menu: Control Panel and Install Printer. In other words even though CONTROL.ACC(old) is a single program, it take up two desk accessory slots.

2. The ST allows you to have only six desk accessories in memory at one time, so we should be careful to fill the six DA slots only with desk accessories which are really needed.

3. Most people may only use the Control Panel and Install Printer accessories occasionally. In fact, they may only use them once, when they configure the Desktop prior to creating their master DESKTOP.INF file. After the DESKTOP.INF file has been created, the Control Panel and Install Printer settings are automatically activated. So, in a sense, CONTROL.ACC(old) ends up merely hogging two desk accessory slots and consuming about 16k of memory.

4. What about the Control Panel's time and date function? If you haven't purchased an add-on battery-operated clock, (or you don't have a Mega ST, which comes with a battery-operated real-time clock) aren't you going to need the Control Panel in order to make these settings each time you power up?

   Maybe not. Quite awhile ago I gave up the Control Panel in favor of a public domain time-and-date program called, appropriately, TIMEDATE.ACC. (You can run its sister program, TIMEDATE.PRG from the Desktop, if you don't want to sacrifice a desk accessory slot.)

I did this for two reasons: (1) a dialog box in TIMEDATE.ACC automatically pops up on my screen every time I power up, forcing me to make these settings. When I used the Control Panel, I often forgot to set the time and date. (2) I find it easier to use TIMEDATE.ACC than the Control Panel. (See Chapter 11 for a mini review of the program.)

REPLACING OR ELIMINATING CONTROL.ACC

It would be nice if 520 and 1040 owners could get rid of the CONTROL.ACC(old) file. But without it, GEM won't read in all the information from the DESKTOP.INF file. Fortunately, there are two things can be done to escape this dilemma.

The first option is to replace CONTROL.ACC(old) with the Mega's CONTROL.ACC(new) file. Although CONTROL.ACC(new) takes up only one desk accessory slot, it combines into one desk accessory the functions of the old Control Panel, Install Printer and Set RS-232 Config. windows. (See Figure 6.1.) CONTROL.ACC(new) is in the public domain, and is available on BBSs or from PD disk sources. (I received my copy on the January 1988 disk from *ST Informer* magazine.)

The second option is one that's available to 520, 1040 and Mega ST owners alike: don't use either CONTROL.ACC(old) or CONTROL.ACC(new), but instead, use GET_DEFS.ACC. GET_DEFS.ACC is a public domain program created by Chris Latham, who writes the "Uitlity Closet" and "Public Domain Watch" columns for *ST Informer* magazine.

Although GET_DEFS.ACC is a desk accessory, it doesn't use even one of the slots in the DESK pull-down menu. However, this short program is still *treated* as a desk accessory, which means that you'll only be able to use five other DAs along with GET_DEFS.ACC. However, by using GET_DEFS.ACC, one of your remaining five DA slots can be occupied by a desk accessory which uses two slots, even though it's only one accessory. (Minos is an example of this type of desk accessory.) With GET_DEFS.ACC on your boot disk, your DESKTOP.INF settings are implemented every time you reboot, which means you don't need to have the CONTROL.ACC file on your boot disk.

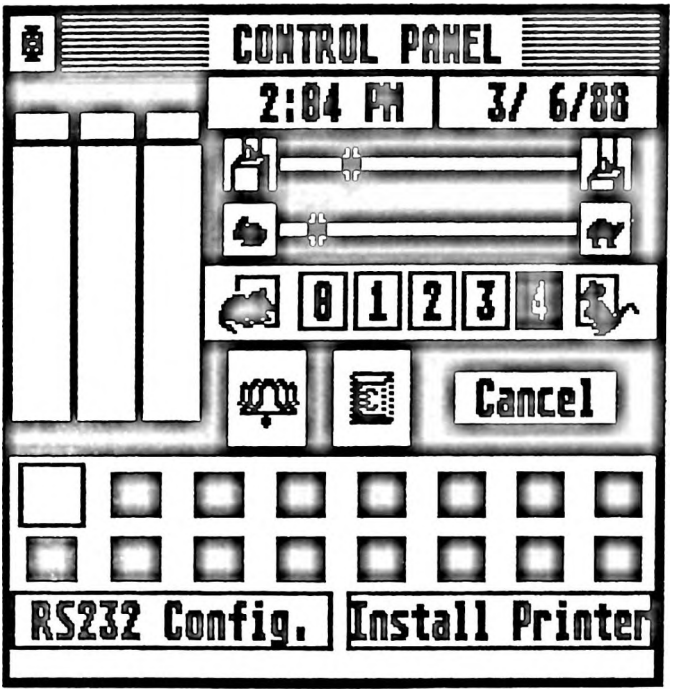

Figure 6.1 - CONTROL.ACC(new)

WINDOW POSITIONS

QUESTION: If I have two windows open on the Desktop and I close one, then reopen it, sometimes it doesn't return to its original place. Instead, it opens on top of (and completely overlaps) the other window. The strange thing is that sometimes this happens and other times it doesn't.

ANSWER: This phenomenon occurs when it is the *first* window which you opened, then closed, then reopened. When you close, then reopen, the *second* window that you originally opened, this window will return to its preveious position.

Somewhere in ROM there is a data table or calculation that keeps track of the size and positions of open windows, even after they're

closed. Aparently, when you close the first window, the second window becomes window number one, although it remains in its "window number two position." When you then open a new window, (i.e., a second window) it is placed in window position number two, where unfortunately, the other window already exists. This occurs when using the ROMs supplied with the 520 and 1040 STs. However, some future ROM version may correct this bug.

Incidentally, you may want to save in your DESKTOP.INF file the positions and sizes of the four windows that it's possible to have open at one time. To do this, open four windows (it doesn't matter which drives the windows are of), position them where you want them, then close all or some of them, depending on whether you want them to be open when you boot up. Now choose SAVE DESKTOP from the OPTIONS MENU. From now on, whenever you open a number of windows, the first one will go to its particular place, the second to its place, and so on. This information about the position of all four windows is saved even if you have chosen not to have *any* windows displayed on boot up.

ANOTHER WAY TO CHANGE THE DESKTOP.INF FILE SETTINGS

In addition to being able to customize the Desktop by using the mouse and the SAVE DESKTOP function, it's also possible to alter the DESKTOP.INF file directly. This can be done by loading the DESKTOP.INF file into a text editor or word processor and selectively altering the contents of the file. However, this method involves some delicate alteration, so if you're not particularly adventurous, or aren't interested in learning anything more than what's absolutely necessary about configuring the Desktop, you should stick to the mouse/SAVE DESKTOP method.

A TYPICAL DESKTOP.INF FILE

Here's what a typical DESKTOP.INF file will look like when you view it from within a word processor:

```
#a000000
#b001100
#c77700070
0600070055200505552220770557075055507704011103
#d
#E 93 03
#W 00 00 2E 01 22 17 09 D:\*.*@
#W 00 00 2E 01 22 17 00 @
#W 00 00 2C 0A 24 0E 00 @
```

```
#W 00 00 0F 0A 15 0B 00 @
#M 04 02 00 FF D D  RAM DISK@ ' @
#M 04 00 00 FF A FLOPPY DISK@ @
#M 04 01 00 FF B FLOPPY DISK@ @
#T 04 07 02 FF   TRASH CAN@ @
#F FF 04   @ *.*@
#D FF 01   @ *.*@
#G 03 FF   *.APP@ @
#G 03 FF   *.PRG@ @
#F 03 04   *.TOS@ @
#P 03 04   *.TTP@ @
```

Each character in this file represents a bit of information about your Desktop. The length and content of a particular DESKTOP.INF file will vary, however, depending on how your Desktop was configured when the file was created.

Here's a list of what each line in the above file represents.

Line # a - stores the settings for the "Set RS232 Config." desk accessory. Telecommunications programs set these things themselves, so I never bother setting this accessory's parameters.

Line # b - settings for the "Install Printer" desk accessory:

O	1
Dot matrix	Daisy wheel
Black/white monitor	Color monitor
Atari printer (1280)	Epson printer (960)
Draft quality	Final (letter quality)
Printer (Centronics port)	Modem (serial port)
Feed (continuous paper)	Single sheet

Line # c- Control Panel color settings (16 color-palette values), mouse double-click response speed, keyboard "audio feedback" on/off, bell tone on/off, keyboard delay speed, and keyboard repeat rate.

Line # d - unused. Probably reserved for future use.

Line # E- settings for whether disk directories and folders are displayed as text or icons, and whether they're sorted by name, date, size or type.

Lines beginning with #W - these four lines determine how the windows will appear. For instance, the "D:*.*@" in the first of the W lines causes the window of my RAM disk, drive D, to appear every time I boot up.

Lines beginning with #M - contain information about the disk icons. There will be two M lines if you have two disk icons, three if you have three icons, and so on. Where the icons

will appear on the Desktop is contained in the first two sets of numbers. The next set of numbers determines what kind of icon will be displayed: 00 for file-drawer, 01 for document, 02 for Trash Can, 03 for program, or 04 for folder. The FF value apparently doesn't do anything, and the remaining characters on each line constitute the disk icon captions.

Line # T - Trash Can icon information.

The remaining lines - contain information regarding the display of files, folders and program types (GEM, TOS, TTP).

USING A WORD PROCESSOR TO ALTER THE DESKTOP.INF FILE

Altering the DESKTOP.INF file with a word processor or text editor is not only fun, it's also the only way to make certain changes to your Desktop. For instance, it's impossible to change the wording that appears on your Desktop's Trash Can icon by using the mouse and the SAVE DESKTOP menu method (described above). For this and other doctoring, you'll have to use a word processor. Here's how to do it.

1. First, make a copy of your existing DESKTOP.INF file. Working on a copy is a safety measure, since once the file's in the word processor, you may inadvertently make alterations to the file which will prevent it from working properly. Give the original another name, such as DESKTOP.OLD, and work only on the copy.

2. Load the copy of the DESKTOP.INF file into a text editor or into a word processor that can save files in ASCII format. If you use a word processor, set the top and left margins to zero.

3. Make whatever changes you want. Here's how to change the name of the Trash Can. Position the cursor over the T in the line containing the words Trash Can, delete these two words, then replace them with whatever other word(s) you want. Maybe you'd prefer the word INCINERATOR, or BLACK HOLE, or WHOOPS, instead of the stock Trash Can. But don't change anything else in this line, since every character has some effect. For instance, leave in tact the @ characters, as well as the single blank space which separates them. (Note, however, that the actual contents of *your* DESKTOP.INF file may vary slightly from the one reproduced above.)

4. Once altered, save this file in ASCII format as DESKTOP.INF, then copy it onto a disk that you can use to boot with.

5. Insert this disk into drive A, then press [Reset], or turn the computer off, then on again.

6. If you've altered the file properly, the Trash Can icon will be displaying its new label. If not, you made a mistake somewhere, so trash the newly created (but faulty) DESKTOP.INF file and start over again at step 1.

LIMIT THE DISPLAY OF FILES

You can also use a word processor to edit the DESKTOP.INF file so that, when you boot up, only certain types of files are displayed in a disk's window. For instance, your boot disk may contain 40 or more data files and programs, but chances are that when you power up, the first thing you'll do is access a program, not a data file. Therefore, by causing only those files with .PRG extensions to be displayed, it will be easier to find the particular program you want to run. Here's how to do this.

Find the first line in the DESKTOP.INF file that begins with #W. This is the first "window line," and it contains information about how the first window will be displayed. At the end of this line you'll see *.*@. Change this to read *.PRG@, then save the file in ASCII format and re-boot. Now only the .PRG files will be displayed. At any time, however, you can easily bring about a display of *all* the disk's files merely by double-clicking on the drive's icon again. The display in the second window won't be limited to .PRG files.

Although I've used the example of limiting display to .PRG files, you can use this trick with any type of files you'd like. Maybe you'd like only .DOC files to be displayed, or only .NAT files.

Warning: if you've got a hard drive connected to your ST, it'd be a good idea to disconnect it prior to experimenting with a word processor-altered DESKTOP.INF file. The October 1986 issue of *COMPUTE!'S Atari ST* magazine mentioned a situation where altering data in the file apparently was responsible for a hard drive failure and data loss.

Although, as mentioned, using a word processor or text editor is necessary in order to change a number of DESKTOP.INF file settings, many of the other parameters in the DESKTOP.INF file can be changed most easily by using the Control Panel/SAVE DESKTOP method. Use the word processor method only for fooling around, or for changing something like the name of the Trash Can, which can't be altered with the Control Panel.

MISCELLANEOUS NOTES

1. You can create a number of different DESKTOP.INF files, each containing different Desktop settings. For instance, two people who use the same computer may prefer different mouse-click and keyboard delay speed settings, as well as different arrangements of the Desktop icons. Each can have his own boot disk containing a personalized DESKTOP.INF file.

2. If you can't find a DESKTOP.INF file on any of your disks, don't worry. You can create a new DESKTOP.INF file merely by performing the SAVE DESKTOP function from the GEM Desktop.

3. When you create a DESKTOP.INF file by selecting SAVE DESKTOP from the OPTIONS menu, the new DESKTOP.INF file is *usually* sent to drive A. However, there are at least two situations in which the file may be sent somewhere else.

   A. If you have a hard drive connected to your ST, the computer will write the DESKTOP.INF file to the root directory of the hard drive. Then whenever you boot up, the computer checks drive A to see if there's a DESKTOP.INF file. If there isn't, it reads the information from the DESKTOP.INF file on the hard drive.

   B. I used a RAM disk once, and when I selected the SAVE DESKTOP option, the DESKTOP.INF file was written to the RAM disk, instead of to drive A. I then had to copy that file to the disk in drive A. This situation, however, doesn't occur with most RAM disks.

4. If you'd like to have copies of the same DESKTOP.INF file on more than one disk, you don't need to perform a SAVE DESKTOP function for each disk, although you can if you want to. Instead, it's often easier to copy an existing DESKTOP.INF file to the other disks.

5. In the same way that CONTROL.ACC (although it's only one program) creates two desk accessories (Control Panel and Install Printer), the file called EMULATOR.ACC also creates two desk accessories: VT52 Emulator and the Set RS232 Config. Very few users install EMULATOR.ACC, however, since the settings available through its two desk accessories are easily controlled by tel-com programs.

6. You may want to activate the Read-Only attribute for your specially created DESKTOP.INF file. This will prevent you from altering or trashing it by accidentally performing a SAVE DESKTOP action.

CHAPTER SEVEN

ADJUSTING the CONTROL PANEL'S PALETTE SETTINGS

QUESTION: I use a black and white monitor, and once in a while a public domain program alters my screen display so that the letters become white on a black background. This inverted image remains even after I exit the program, no matter what I do. Is there some way to bring back the normal display without having to press [Reset]?

ANSWER: Yes. The change can be accomplished by making a simple adjustment in the Control Panel desk accessory. But let's cover some basics before describing how to make the adjustment.

PALETTE CONTROL WORKS IN ALL THREE RESOLUTIONS

The palette control is used to adjust the colors of the screen display in any of the three monitor resolutions - low, medium, or high. However, if you're using a black and white monitor, you'll only be able to switch between black images on white background and white images on black background.

No matter which resolution you're operating in, though, the same general steps are involved in adjusting the Control Panel's palette controls. First, choose CONTROL PANEL from the DESK menu. (If CONTROL PANEL isn't available at the DESK pull-down menu, reboot with a disk containing the CONTROL.ACC file.)

Adjustment of the palette control is accomplished by mouse-clicking in two areas of the Control Panel: the primary-color sliders, and the palette boxes. (See Figure 7.1.)

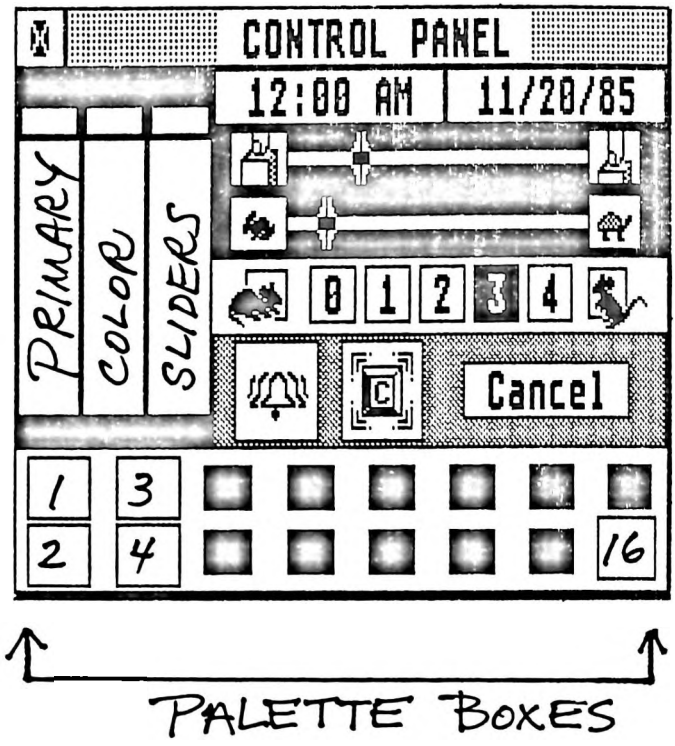

Figure 7.1

PALETTE CONTROL ADJUSTMENTS IN A NUTSHELL

Here's an overview of how to make palette control adjustments:

1. Mouse-click on one of the palette boxes.
2. Adjust the three primary-color sliders.
3. If necessary, repeat steps 1 & 2 for remaining palette boxes.

The number of Control Panel adjustments, as well as how those adjustments are made, will vary depending upon what screen resolution you're in. That is, the Control Panel is used a little bit differently in low, medium and high resolutions.

ADJUSTMENTS IN MEDIUM RESOLUTION

There are 16 palette boxes in the Control Panel, arranged in two rows at the bottom of the panel. As an aid in this discussion, I've assigned a number to a few of these 16 boxes. (See Figure 7.1.)

In medium resolution, only four of the 16 palette boxes are *active*. That is, only four of the boxes will be affected by changes you make. The active boxes are the first two in each row (box numbers 1, 2, 3 & 4 in Figure 7.1).

The first step in making an adjustment is to mouse click on one of these four active palette boxes. *Which* palette box you click on will depend on what it is that you want to change the color of.

Each one of the four active palette boxes controls the color that's displayed in a particular area of the screen. Here's what the four medium resolution boxes control:

Box # 1 - The left-most box in the upper row controls the color of the border around the screen, the windows, and the icons. If you want to alter the color in any of these areas, mouse-click on box # 1.

For instance, if the border and the windows of your screen are white and you'd like to make them blue, choose box #1.

Box # 2 - The left-most box in the bottom row controls the color of the letters and borders that appear on the Desktop; that is, the words in the Menu Bar, the names of files in windows, and the icon names. This lettering is often set so as to be black, but by clicking on box 2 you'll be able to alter the color.

Box # 3 - The second box in the upper row controls the color of a few things which may be harder for you to observe.

One of the things that box 3 controls is the color of the thin lines which follow (and momentarily remain) after you've closed a window, or lead the way when you've opened one.

You may not have thought about these lines before, since they're so thin and their presence is so fleeting. But if you go to the Desktop and open a window, you should be able to see them, trailing behind a closing window. These "ghost" lines are often set so as to be black, but you can adjust them to any color you want.

In addition to the ghost lines, some programs let you use box # 3 to set the color of some specific image. In Regent Word II, for instance, box 3 determines what color the rulers will be. If you use this word processor, you can make the rulers a vivid color, such as red, so they stand out from the rest of the text.

Box # 4 - The second box in the lower row controls the color of the Desktop. The default color for the Desktop is green, and if you'd like to change that, choose box 4.

Once you mouse-click on one of these boxes, the box will expand, indicating that it has been selected. (If it doesn't expand, you've probably clicked on one of the 12 inactive boxes.) Let's assume you've clicked on box #4, after deciding that a green Desktop is not the best thing to be confronted with each morning. Now you're ready for step two: adjusting the primary-color sliders.

PRIMARY-COLOR SLIDER ADJUSTMENT

To modify the color of the palette box you've selected, move one or more of the three primary-color sliders using the left mouse button. The sliders can be moved either by dragging a slide bar, or by mouse-clicking on the letters R, G, or B at the top and bottom of the slide bars.

The R slide controls now much red will be contributed to make up the color of the palette box you're working on, the G slide controls how much green, and the B slide how much blue. Moving a slide up will increase the brightness of that primary color's contribution.

As you move a primary-color slide, a number from 0 to 7 will be displayed, indicating how much of that color you've selected. The effect of increasing or decreasing that color can also be observed in the palette box that you're working on.

It's possible to numerically describe the color of a palette box, as you can see by looking at the numbers at the top of the slides. For instance, if you've set the R slide all the way to the top and the G and B slides all the way to the bottom, the resultant red color is designated 700. Being able to describe a color numerically would be

useful if you wanted to tell a friend what color you're using, or for choosing that particular color from within a programming language.

Since it may be difficult, until you get used to it, to set the three sliders so as to bring about a desired color, here's a list that provides the numerical values for a number of colors:

377 aqua (light)
000 black
007 blue
337 blue (light)
077 cyan
070 green
373 green (light)
444 grey
222 grey (light)
707 magenta
737 magenta (light)
700 red
733 red (light)
777 white
770 yellow
773 yellow (light)

At any time when adjusting the three primary-color sliders, mouse-clicking on the CANCEL button will cancel whatever adjustments you've made so far and reinstate the palette configurations that were in effect when you opened the Control Panel.

TOTAL NUMBER OF POSSIBLE COLORS

Because we can choose from among eight values (0 to 7) for each of the primary colors (R,G and B), there are actually 512 different colors that we can create (8 x 8 x 8).

However, a medium resolution monitor can display only four of these 512 colors simultaneously, and a low resolution monitor can display only sixteen.

ADJUSTMENTS IN LOW RESOLUTION

In low resolution all of the sixteen palette boxes are active. In general, the low resolution adjustment is accomplished just like that in medium resolution, with at least one exception.

In low resolution, it is palette box # 16 which controls the ghost lines which precede and follow the opening of windows. (This is controlled by box # 3 in medium resolution.)

ADJUSTMENTS IN HIGH RESOLUTION

With a monochrome system, the computer will initially default to a display of black text and graphics on a white background. The only palette control change you can make is to invert this so that text and graphics are white on a black background.

To accomplish this inversion, mouse-click on either the #1 or #2 palette boxes (it doesn't matter which). Then adjust the three slides away from whichever direction they're presently in. That is, if they're all the way to the top, slide them all the way to the bottom, or vice versa.

THE FINAL STEPS

Whichever resolution you've been operating in, once you've adjusted the primary-color sliders, all you need to do now is mouse-click on the Control Panel's close box.

But don't shut off the computer! Unless you save your settings, all of the palette adjustments you've just made will be lost when you power down. To save your settings, choose SAVE DESKTOP from the OPTIONS menu and your settings will become part of the DESKTOP.INF file that's created.

From now on, whenever you boot up with both the DESKTOP.INF and CONTROL.ACC files on your boot disk, these palette choices will be implemented. (See Chapter 6 for an explanation of why the CONTROL.ACC file is necessary.)

MISCELLANEOUS NOTES

1. Not all programs use the palette selections you've chosen. For those that do, you'll be able to use the Control Panel to customize the colors of certain things within those programs. Only by experimenting with each individual program will you be able to determine what is controlled by a particular palette box's color.

2. If you use a desk accessory which reads an outside resource file from a disk, you should be aware of a potential problem that can occur when changing resolutions.

   Whenever you change resolutions, your ST reloads whatever desk accessories that are on the disk in drive A, as well as any desk accessory resource files. But - and here's the problem - GEM doesn't flush the preveiously loaded resource files out of memory before loading them again. This results in a resource file being loaded twice, leaving you with less free memory. In fact, if you keep changing resolutions, the amount of available memory will continue to decrease until your system bombs.

   There are two ways to deal with this problem: (1) Don't use desk accessories which read an outside resource file, or (2) If you do use such a DA and you want to change resolutions, first press [Reset] - or perform a cold boot - and boot with a disk containing a DESKTOP.INF file which sets your system to the resolution you want. In other words, change resolutions by rebooting with another boot disk, rather than by selecting SET PREFERENCES from the Desktop's OPTIONS heading.

   Of course, if you have only a monochrome monitor, you won't be confronted with this problem, since you won't be changing resolutions.

CHAPTER EIGHT

DESK ACCESSORIES

QUESTION: A friend gave me a public domain program called DIGICLOK.ACC. But when I double-clicked on it from the Desktop, I got a message that said, "You can only print or display this document." Why won't it run?

ANSWER: That program, as well as any others that have an .ACC three-letter extension, can't be run by the usual method of double-clicking from the Desktop. It's a special kind of program called a desk accessory.

DEFINITION

Desk accessories are programs which the ST loads automatically whenever the computer is turned on. They remain in memory, in the background, while you go ahead and run other main application programs.

The Control Panel is probably the best known desk accessory, since it's bundled with each new ST. But there are many other desk accessories, some of which are commercial products, others which are free public domain programs.

There are desk accessories which count the number of words in a document; allow you to copy and delete files; automatically dial phone numbers; provide all the functions of sophisticated calculators..... as well as many more.

When you want to use a desk accessory, first make sure that it resides on the root directory of your boot disk, then boot the computer. You can now move the mouse pointer up to the DESK menu and click on the accessory you want. Occasionally, though, you'll find that a GEM program has substituted the DESK option in the Desktop menu and replaced it with another word or symbol. For example, from within 1st Word, desk accessories are accessed from the Atari logo. In every case, however, accessories will be found in the leftmost item in the Desktop menu bar.

DESK ACCESSORY RULES AND FACTS

1. You can have only six desk accessories (DAs) in memory at one time.

2. DAs are loaded automatically from your boot disk - the disk that's in drive A when you turn on the power. Therefore, if you want to use a DA, make sure it's on your boot disk. If it's not, the DA won't appear in the GEM menu and therefore won't be available for use.

3. Generally, DAs are accessible from within any program which displays the GEM menu bar. They're not available from within non-GEM programs, such as those which have .TOS or .TTP three-letter extensions.

4. DAs are loaded into memory whenever you perform a cold start (turning on the computer) or a warm start (pressing the [Reset] button). Therefore, if your computer is already turned on and you decide you'd like to use a different set of DAs, insert another boot disk and press [Reset]. (If you're using a desk accessory that utilizes a resource file, it's better to use a cold start to install a new set of DAs. [See Chapter 9 for more on cold starts.])

5. Since changing resolutions - such as from low to medium - brings about a type of reset similar to, but not as thorough as, pressing the [Reset] button, a resolution change will affect your installed desk accessories. Any existing DAs will be flushed from memory, and any DAs on the disk in drive A will be loaded. Because of this, make sure your boot disk is in drive A when you switch resolutions, if you want to retain any installed DAs.

6. If a program is a desk accessory, it must have an .ACC extension to work. Any program without an .ACC extension is not a desk accessory.

7. Changing a regular program's extension to .ACC will not turn it into a desk accessory. Conversely, changing a DA's extension to .PRG won't transform it into a conventional program.

8. If you put a desk accessory into a folder, it won't be loaded into memory. In order for desk accessories to work, they must be on the A disk's root directory, or on the root directory of a hard drive.

9. If you have an older ST which loads TOS from disk, you'll have to rename your desk accessories DESK1.ACC, DESK2.ACC, and so on, in order for them to work.

10. If you have a number of DAs on your boot disk and you discover that one of them isn't listed in the DESK menu - or if it is listed, it doesn't work - here's what to do. First, count how many DAs are on the disk. Remember, the ST can load only six of them into memory.

    Second, note that some desk accessories perform their jobs completely by themselves without requiring or allowing any input from the user. Some print spoolers and RAM disks are of this type, and if so, the DA's name may appear in the DESK menu merely to notify you that the program has been installed.

    If, however, your boot disk contains a desk accessory that should work, but doesn't, try creating a new boot disk. Copy the desk accessories onto the disk one at a time, leaving to be copied last the DA that wouldn't work. The reason you want to try this is that some desk accessories work only if they were the last DA to be copied onto the disk.

    If this doesn't work, try removing, one at a time, the DAs that do work. After each removal, press [Reset] and see if the un-functioning DA is now working. What you're trying to determine is whether there are two DAs that are incompatible with each other. There are a few DAs that won't work when they're teamed up with another particular desk accessory, although each will work individually when they're not together on the same disk.

11. It's possible for one desk accessory program to take up more than one desk accessory slot in the pull-down menu. An example of this is the CONTROL.ACC file, which creates two desk accessories - Control Panel and Install Printer.

DESK ACCESSORY HINTS

1. Since you can have only six DAs installed at one time, you may want to create a number of different boot-up disks, each with a different set of desk accessories. For instance, after determining which DAs will be useful during word processing, create a special word processing boot disk containing those DAs. A different set of desk accessories, useful from within a spreadsheet, could be on a second boot disk, etc.

2. Although only six DAs will be loaded, it's OK to have more than six on your boot disk. But if you do have more, it's best to "deactivate" those which you don't plan to use in the near future. To do so, either put them into a folder, or alter their extensions. I alter the extensions of unwanted DAs by changing them from .ACC to .AC, since the ST's operating system ignores those files with the .AC extension.

3. Although most desk accessories are smaller than a full application program, DAs do use up memory. If you've got a number of them loaded, you'll have considerably less free RAM to use for other applications. And beyond this, a few DAs are quite large. Finally, the size of your ST will affect what, and how many, DAs you'll want to use. If you still load TOS from disk, you don't have much memory to play with, and even if you have TOS in ROM (and you own a 520 ST), you'll want to choose your desk accessories carefully.

4. When using a non-GEM program, it may be best to have only a few, or no, desk accessories in memory. There's no sense in allocating memory for DAs when you can't use them. For example, if I'm going to be using the non-GEM version of the VIP Professional spreadsheet (which itself takes up quite a bit of memory), I boot up with a special disk which doesn't contain any DAs.

5. If you want to determine how much memory a particular desk accessory consumes, cause it to be installed in memory, then run the public domain program FREERAM.PRG. This will tell you how much of the computer's memory is remaining. Then remove that desk accessory from your boot disk (or rename its extension), re-boot, and run FREERAM again. This second memory test should yield a higher RAM count, and the difference between the two counts should equal the amount that your DA consumes.

CHAPTER NINE

COLD BOOTS and WARM BOOTS

If you hear someone talking about "booting" their ST, they're merely talking about starting up the computer. To be precise, there are actually two types of booting: cold boots and warm boots.

A cold boot is what occurs when the on/off switch on the back of your ST is turned on; or (if the computer is already on) what occurs when that switch is turned off, then on again. You may also hear a cold boot referred to as a coldstart, or powering up.

A warm boot, sometimes referred to as a warmstart, is what occurs when you press the [Reset] button on the back of the computer.

WHAT HAPPENS WHEN THE COMPUTER IS TURNED ON

In order to know when to perform a cold or a warm boot, it will be good to have a basic understanding of what goes on when the ST is powered up.

When you turn your ST on in the morning for the first time, the computer goes through its power-up routine. As part of this routine a particular memory location is checked for the presence of what is called a magic value. Since the machine has been off and therefore nothing is in memory, this magic value isn't found. As a result, a number of special things occur: all the memory is tested, all the memory is erased, and a test is made to determine whether the unit is a 520, a 1040, or whatever. Then a magic value is put into memory. As can be imagined, all of this takes a bit of time to perform. That's why a cold boot takes a while to be carried out.

Thereafter, whenever you perform a warm boot by pressing the [Reset] button, the computer checks for the existence of the magic

value. This time the value is found, and as a result, the memory isn't tested, nor is it cleared. It's because these things don't occur that a warm boot is quicker than a cold boot. And it's because not everything is erased from memory that a reset-proof RAM disk can survive a warm boot. (But be careful: even a reset-proof RAM disk can't survive a cold boot. See chapter 1.)

RECOVERING FROM A LOCKUP

QUESTION: Some of the public domain programs that I've acquired end by locking up my system. Is it OK for me to just forget the [Reset] button and perform a cold boot?

ANSWER: No. It's better to try using the [Reset] button. Here's why.

DISADVANTAGES OF A COLD BOOT

In some situations, using the [Reset] button is preferable to a cold boot, since a cold boot has the following four disadvantages:

1. When a cold boot occurs, a number of parameters which have been previously saved are lost. Performing a warm boot, on the other hand, doesn't cause these parameters to be lost.

   A. For instance, after setting the time and date in the Control Panel, if you perform a cold boot, you'll then have to reset the time and date again, since your earlier settings will have been wiped out.

      But if you had performed a warm boot instead, the correct time and date would be maintained, provided that whatever boot disk you used at the beginning of the day was in the computer when you performed the warm boot.

      If you had performed the warm boot without having your boot disk installed, the correct time and date wouldn't be visible in the Control Panel. However, interestingly enough, the correct time and date are still being remembered, provided you don't perform a cold boot. All you'd have to do in order to cause the correct time/date display to appear in the Control Panel would be to warm boot again, this time with the boot disk.

Note, however, that the time/date information may even not survive a warm boot if you're using one of the public domain substitutes for the Control Panel, such as TIMEDATE.PRG.

B. In the same way that the time/date settings can survive a warm boot, the contents of a "Reset-proof" RAM disk may also not be lost. This may be true even if the disk you have in drive A when you press [Reset] doesn't automatically run the RAM disk program again. In such a case, although you won't be able to access the RAM disk or its contents, they'll still be there. Just put the RAM-disk-creating boot disk in drive A and press [Reset] a second time. The RAM disk's contents will be "resurrected."

2. Every time you turn on your computer, it is subjected to a certain amount of stress. It's sort of analogous to the stress created in a light bulb when you turn it on.

   Suppose you have two incandescent light bulbs, the first of which is left turned on all the time, day and night. But in an attempt to save electricity, the second bulb is turned off whenever it's not needed. As a result, this second bulb gets turned on and off a lot each day.

   Ordinarily, the first bulb will last longer than the second, even though the second ends up being on for a much shorter period of time than the first. This is because turning on a bulb subjects it to a stress that tends to shorten its life. Think about it. Haven't you noticed that when one of your light bulbs finally burns out, it occurs right after you've turned it on? In the same way, a cold boot subjects your computer to a certain amount of stress, whereas a warm boot doesn't.

3. If you have a RAM disk installed, whatever's inside it will be lost forever.

4. A cold boot takes longer to perform than a warm boot.

SOFTWARE TO THE RESCUE

Of course, there are times when we need to perform a cold boot. We may want, for instance, to deliberately erase everything that's in memory. A warm boot won't do this.

MichTron has created a program which produces a cold boot's effects, without bringing about the cold boot's harmful effects on the

computer. The program is called KEYCOMBO.PRG, and it's one of twenty-one utilities found on their STuff disk.

When KEYCOMBO is installed, you can perform a quasi-cold boot of the system by pressing [Control]+[Alternate]+[Shift]+[Delete]. Now I know this looks like a horrible combination of keys to have to press all at once, but it's not as bad as it looks. And anyway, you don't want to be able to bring about the finality of a cold boot by mistake, so it's good that KEYCOMBO uses this mildly cumbersome key combination.

The advantage of using KEYCOMBO's cold boot rather than the on/off switch is that, with the former, the system is not subjected to a surge of electricity.

There's another advantage of using KEYCOMBO. If your ST sits in a place that makes it hard for you to reach behind the machine, you'll appreciate being able to perform a cold boot from the keyboard. In fact, KEYCOMBO also allows you to perform a warm boot by pressing [Control]+[Alternate]+[Delete].

MISCELLANEOUS NOTES

1. If you have a 1040 ST and you're going to perform a cold boot, wait about 15 seconds after turning the switch off before turning it on again, since it takes a while for the 1040's power supplies to "zero out." Apparently, the power supply has enough energy in reserve to prevent RAM from immediately being erased. You'll especially want to give the computer this 15 second rest if you had a RAM disk installed before you turned off the switch.

   In fact, with a RAM disk installed in a 1040 ST, if you turn the switch back on after having immediately turned it off, you may experience a weird phenomenon: the drive letter for the RAM disk may advance one letter. For instance, if your RAM disk is normally designated as drive D and you perform a "quick" cold boot, the RAM disk may appear as drive E. Performing another "quick" cold boot may cause it to appear as drive F, and so on. The solution is to do the 15 second cold boot, which will result in the RAM disk properly being installed as drive D.

CHAPTER TEN

INSTALLING an APPLICATION

For many months after buying my ST I neglected to take advantage of the system's INSTALL APPLICATION capability, thinking it was a silly feature that would be a waste of time. But when I eventually got around to trying it out, I realized that instead of wasting time, it was actually a time *saver*. Here's why.

With many other computers, in order to load and work on a word processing file (or any other data file), I'd have to go through two steps. First I'd load and run the word processor; once loaded, I'd have to tell the application what file I wanted to work on; and finally, the file would be loaded.

This, of course, is exactly the procedure I had been using on my ST prior to understanding the usefulness of the INSTALL APPLICATION feature. But after having installed an application, all I have to do is double-click on a *file*, and everything else is done for me automatically: the program is loaded, then the program loads the file.

In other words, one action on my part - double-clicking on a file - performs *two* things: running the application as well as loading the file. Although this is admittedly only a minor time saver, I like to eliminate whatever unnecessary steps I can, and I therefore like, in some situations, the INSTALL APPLICATION function.

HOW TO INSTALL AN APPLICATION

1. Insert the disk containing a program. (Although I'll use as an example a word processor, any program which creates data files may be capable of being installed: a spreadsheet, a paint program, a database, etc.)

2. From the Desktop, open the window for the disk that contains the program.

3. Click once on the program's icon (or name).

4. Select INSTALL APPLICATION from the OPTIONS menu. A Dialog Box will appear, with the cursor positioned at the end of the DOCUMENT TYPE line. Type in whatever three-letter extension you normally use for data files created with that program (or the three-letter extension that is automatically assigned to that program's data files).

   For instance, if you are performing the INSTALL APPLICATION function for 1st WORD, type in DOC, since that's the three-letter extension that 1st WORD assigns to its data files. On the other hand, if NEO-Chrome is the application you're installing, type in NEO, since its data files use that extension.

5. Mouse-click on the OK box. Installation is now complete. From now on, whenever you double-click on a data file which has the same three-letter extension that you designated in the DOCUMENT TYPE field, the data file will automatically be opened within its application.

INSTALL APPLICATION AND TTP PROGRAMS

The INSTALL APPLICATION feature is particularly useful when using TOS-takes parameters programs. To understand why, consider the use of the ARCH.TTP de-arching program, a very popular TTP program that's in the public domain.

Before I discovered the wonders of installing an application, each time I wanted to de-arch a file I first had to double-click on the ARCH.TTP program, then try to remember the exact name of the file I wanted unsqueezed, and finally, type in the file name correctly.

But now that I've installed ARCH.TTP with "TTP" as the document type, I merely have to double-click on the file that I want unsqueezed. Not only do I not need to remember the exact characters in the file name (since all I need to do is find it by looking at the list of files in the directory window), but I also don't need to type in anything.

MULTIPLE INSTALLATION

There's nothing to prevent you from assigning more than one three-letter extension to an application. For instance, you could install 1st

WORD to work with any file with a DOC extension. Then after that installation, you could choose INSTALL APPLICATION a second time and install 1st WORD to work with any file with a TXT extension. The act of installing the second extension (TTP) doesn't cancel the first installation (DOC). As of yet, I haven't found a limit to the number of multiple installations that can be made for a single application.

FILE LOCATION IS IMPORTANT

There are a number of rules pertaining to where the installed application (and the data file that's going to run it) can be located.

First, if a disk contains folders, either the installed application and its data files must both be in the same folder, or the application must be in the root directory. If either of these two rules isn't followed, you'll get an error message saying, "This application can't find the folder or file you just tried to access."

Second, the installed application can be located on a different drive than its related data files, provided that the application is in the root directory of drive A. The program's data files can be on drive B (if you have two drives) or on a RAM disk. The data files can even be inside a folder. However, you can't switch them around and put the application on drive B or in a RAM disk.

IDENTIFYING INSTALLATIONS

If you've made multiple installations for a particular application, you can find out what document types have been chosen by (1) choosing SAVE DESKTOP, then (2) looking at the DESKTOP.INF file from within a word processor. Near the bottom of the file you'll find one or more lines that look similar to the following:

```
#G 03 04  1ST_WORD.PRG@ *.DOC@
#G 03 04  1ST_WORD.PRG@ *.IRS@
#F  03 04  SPELLER.TOS@ *.DIC@
#P  03 04  ARCX.TTP@ *.ARC@
```

In this example, the lines indicate that the program 1ST_WORD.PRG has been installed twice, once with DOC as the document type, a second time with IRS as the document type. Additionally, SPELLER.TOS has been installed with DIC as the document type, and ARCX.TTP with ARC as the document type.

Note that the second character in a line indicates what type of program has been installed: G for .PRG or .APP files; F for .TOS files; P for .TTP files.

APPLICATION DE-INSTALLATION

There will come a time when you want to eliminate an installation you've made so that it won't permanently be installed. If you have not yet preserved the installations by using the SAVE DESKTOP function, just press [Reset] and the document type choices will be forgotten.

If you've already performed SAVE DESKTOP, you have two choices: (1) trash the DESKTOP.INF file that was created by saving the Desktop, press [Reset], then use SAVE DESKTOP to create a new DESKTOP.INF file; or, (2) edit the DESKTOP.INF file from within a word processor.

To eliminate an installation by editing the DESKTOP.INF file with a word processor, delete the line containing a specific installation, save the file in ASCII format, then reboot.

MISCELLANEOUS NOTES

1. Two different applications can't be installed with the same three-letter extension. For example, if you install WordPerfect to be run by DOC files, you can't then install Word Writer to also be run by DOC files.

2. After you've installed one or more applications, you should preserve these installations by choosing SAVE DESKTOP from the OPTIONS heading. Otherwise, your installation choices will be lost as soon as you turn off the computer.

3. If there is a document type that you habitually like to view from the Desktop, such as ASCII files with a TXT extension, you probably *won't* want to install an application to be run from this type of data file. If you do make such an installation, it will be impossible to double-click on any TXT file in order to view it, since double-clicking will open the application.

4. USING WILDCARDS - In the process of installing an application, when you're typing in a three-letter extension in the DOCUMENT TYPE field, it's OK to use either the asterisk (*)

or the question mark (?) wildcard. (See chapter 2 for full explanation of wildcards.)

Using a wildcard will allow more than one document type to be associated with an installed application. For instance, let's say it's your custom to assign a TX7 extension to data base files dealing with 1987 taxes, and a TX8 extension to those dealing with 1988 taxes. If you make your data base an installed application with TX? as the document type, then double-clicking on either a TX7 or a TX8 file will run the data base.

5. There are some programs which can't be installed. You'll have to do some experimenting to see which of your applications allow installation.

CHAPTER ELEVEN

PUBLIC DOMAIN SOFTWARE - IT'S FREE

There are three ways to acquire free software. The first way is to break into a computer store and steal whatever you want. This is illegal, dangerous, and not recommended.

The second way is to make copies of programs someone else has purchased. This method is also illegal and not recommended. It's unethical, like zeroxing someone else's ticket to the movies in order to get in free.

The third way is to acquire public domain software. This method is totally legal, is fun, and is highly recommended. In fact, not only is public domain (PD) software free, but the programs' authors actually *want* you to make copies of their software and distribute them to as many people as possible.

A piece of software enters the public domain when its author specifically relinquishes the copyright to the program and donates it to the public. When this happens, you can legally copy and distribute the program to your heart's content, and it won't cost you a cent.

But now for the bad news. You may spend a lot of time sifting through the thousands of public domain selections in order to find programs that suit your individual interests and needs. And I'm not exaggerating. There really are literally thousands of free programs for the ST - some of them very good - and the number is growing daily.

HOW TO ACQUIRE PUBLIC DOMAIN SOFTWARE

There are a number of ways of acquiring public domain software, and all of them are easy. You can download it from a BBS (an electronic bulletin board) or from a commercial communications service such as the Source or GEnie; join an Atari users' group and

copy programs from the group's library; make a copy of a friend's copy (or an Atari dealer's copy); or purchase a disk from one of the companies that specialize in distributing PD software.

I received my introduction to public domain software by roaming around on a few of the BBSs. After downloading a number of mediocre programs, and a few real dogs, I stumbled upon a number of really worthwhile ones. I'll try to save you some time by telling you about a few of the useful or enjoyable PD programs for the ST that I've found.

EXAMPLES OF FREE PROGRAMS

1. YARD.PRG - the survivable ram disk. Even if you have to press the [Reset] button, anything you've loaded or saved to this RAM disk will still be there after recovery from the reset. Its size is adjustable, and you can put it in an AUTO folder and have it installed automatically at power-up. (See Chapter 1 for further description.) Downloaded from Atari Base.

2. KRABAT.PRG - a chess program with a bird's-eye view of the board. Use the mouse to move the pieces on this GEM game from Germany. Change sides, take back moves, set the level of difficulty and even run an extra editing program to alter the way in which the pieces will look. KRABAT is pretty slow compared to commercial chess programs, but it might be the best program for the beginning player, since its lowest level of difficulty allows even a very poor player to beat the computer. Warning: you won't be able to run the program unless you load the files for each piece into a folder called PICTURES. I downloaded a black and white version of KRABAT from Atari Base, but there's now a new version which works both in color and black and white.

3. LABELJRB.PRG - a label maker for disks. This GEM program will read your floppy, RAM, or hard disk, then print out a label containing its contents. If you want stick-on labels for your floppy disks, use pinfeed labels in your printer. Or if you don't need a label, this program can still be used to print directories of your disks onto regular printer paper. In fact, LABELJRB.PRG is so easy to use and so versatile that some people use it to merely read what's on a disk, without printing anything out. (Why, you might ask, don't they just read a disk's directory from the desktop? Because they'd then have to open each folder, one after the other, in order to see all of the files.) In addition to printing the names of files and folders, LABELJRB also gives you the option of printing the number of free bytes on

the disk, the kind of disk format, and the number of formatted bytes. Downloaded from Atari Base.

4. MONOPOOL.PRG - a pool game for monochrome systems. Uses only six balls, and won't allow you to return to the desktop. (You have to press [Reset] to end.) However, the sounds of the balls crashing into each other is very realistic, and it's lots of fun to play. Downloaded from Atari Base.

5. WHEEL_9 - a takeoff of the Wheel of Fortune television game, allowing one, two, or three persons to play. You spin the wheel for money, choose letters or buy vowels, or try to solve the puzzle at any time. Includes several puzzle files and an editing program which allows creation of your own puzzle files. Low resolution. Downloaded from Atari Base.

6. MEGAROIDS - a clone of Astroids, the popular arcade game, in which you shoot moving astroids in order to prevent being destroyed yourself. This is a great game, but requires quite a bit of skill. Runs in black and white and low resolution. Downloaded from Atari Base.

. STWRITER - a word processor. One of the first word processors available for the ST, this program is preferred by a number of users for its speed and number of features. In its original version, GEM isn't used, so you can't use the mouse. The newer GEM version, ST Writer Elite, uses windows, pull-down menus and the mouse. (See Chapter 15.)

8. ARCH.TTP - an unsqeezing program. When you buy a public domain disk or a magazine's monthly disk, you'll probably discover that most of the files have an .ARC extension. Don't panic, however, when you find that double-clicking on one of these programs won't run it. A file with an .ARC extension has merely been squeezed so that more files can fit on its disk. You'll also find that many of the files on BBSs have been arched; they take up less space in the host computer, as well as taking less time for you to download. Before you can use an arched file, you have to de-arch it with ARCH.TTP. Double-click on ARCH.TTP, then type in the name of the file to be unsqueezed.

9. FDI.TOS - a floppy disk indexing program. FDI provides an easy way to make a catalog of the contents of the files on your floppy disks. Run the program, insert disks into a drive, and FDI will create an index of what files you have, what disks they're on, and when they were last updated. Additionally, there's room for you to make comments for each file. For

instance, you could add the comment "request info on Maple Street property tax" so that six months from now you'll remember what the file "RE_MAPLE.LET" contains. FDI will search for a file name containing a particular string, and you can choose to merely display to the screen a list of files, or send the list to the printer.

10. ULTICOPY.PRG - a RAM disk copy program. This program loads into your RAM disk (or to any other disk) every file and folder from a designated floppy. Although it can be run by double-clicking, the most convenient way to use it is from within an AUTO folder. For instance, you can have ULTICOPY load all the files contained on the floppy in drive B into your RAM disk every time you boot up. And by putting a different disk in drive B depending on what type of application you'll be using, you can always have the RAM disk ready (and full) for a particular task. ULTICOPY is a great time saver.

11. WORD400 - a mini-text editor desk accessory. Admittedly not a full-featured word processor, this handy program nonetheless can be ideal for certain work. For instance, since it's a desk accessory, you can access it from within any GEM program. This could be useful if you want to write a review of, let's say, a new game. Get into the game and when you think of something to write about, mouse up to the desk accessory window, click on WORD400, and in two seconds you can start writing. Returning to the game is just as quick. Uses approximately 73K of memory.

12. TIMEDATE.PRG and TIMEDATE.ACC - two clock setting programs. If you don't have a clock card for your ST, you might like one of these programs. Put these two programs and their accompanying resource file (TIMEDATE.RSC) on the root directory of your boot-up disk, and every time you power up, a box will appear on the screen asking you to type in the time and date. Why do this instead of using the familiar CONTROL.ACC to make these settings? First, TIMEDATE forces you to make these settings, which is great if you're the forgetful type. Second, TIMEDATE is easier to use than CONTROL.ACC. With CONTROL.ACC, you need to click the mouse, type in the date, click the mouse, type in the time, click the mouse, then click the close box. TIMEDATE serves the same function, but merely requires typing the time and date and pressing the [Return] key. If you're not the forgetful type and therefore don't always want to make these settings, or don't want to use up one of your desk accessory slots, you can run the TIMEDATE.PRG from the desktop only when you need it.

13. SCRNSAVE.PRG - a monochrome screen-saving program. If you leave your monitor's screen on for long periods of time without changing the display, the phosphors will wear out. SCRNSAVE prevents this from happening by blanking out the display if three minutes go by without the keyboard or the mouse being touched. Once you touch either of these again, the display returns. For those of you who take breaks from the keyboard, SCRNSAVE will be a pleasant alternative to turning down the brightness dial on your black and white monitor. And for those of you with a color monitor, the brightness of which can't be totally turned off, SCRNSAVE is a great idea. Be forewarned, however, that this utility isn't compatible with all programs. For instance, with VIP Professional, once the screen display is turned off, it's not turned on again by keyboard or mouse activity. You have to reboot, unless you're capable of working on VIP in the dark!

14. FREERAM.PRG and FREERAM.ACC - These program tell you how much memory your ST has available for use. Run FREERAM.PRG and a display will tell you, for instance, that you've got "330K bytes free." If you choose to install the desk accessory version of the program, you'll be able to check the amount of memory from within any GEM program.

15. SPOOL.PRG - a print spooler. If you're tired of waiting while your printer works on a lengthy printing job, try SPOOL, or one of the many other public domain spoolers. SPOOL sets aside a part of your ST's RAM as a buffer, which is a storage area for the material that's to be printed. As your printer goes about its job, the rest of your ST is freed for another task. This program allows me to play a quick game of chess while my slow daisywheel is clunking its way along.

16. WRDCOUNT.ACC - a word-counting desk accessory. If your word processor can't tell you how many words you've typed, install this nifty program. Works from within any GEM program and allows you to meet your editor's, or your teacher's, word limitation.

17. STSPEECH.TOS - a speech synthesizing program. After running this program, the screen goes blank and anything you type (up to one line long) appears on the screen. Then when you press [Retrun], the words that you've typed are spoken by the computer. Although it was pretty dramatic the first couple of times I heard it, it doesn't produce nearly as good a synthesis as, say, the voice in Electronic Arts' CHESSMASTER 2000 program. Nevertheless, I discovered that by using ALT, the macro program from MichTron, with SPEECH.TOS, I could

create a bank of 36 words or phrases and store them in ALT. Then, by merely pressing the [ALT] key along with one of 36 letters or numbers, the computer could generate any of the 36 preassigned phrases from within STSPEECH.TOS. This makes ALT and STSPEECH.TOS capable of being used by handicapped non-speaking persons, even if they can't type out words on a computer. And if they use ONEHAND, the utility that turns the [ALT] key into a toggle, all they need to be able to do is press one key at a time. (ONEHAND is on MichTron's STuff disk.) - Note: when you're inside SPEECH.TOS, pressing a period followed by [Return] will put you into a "phoneme mode," and pressing two periods followed by [Return] will return you to the "English text mode." Pressing [CONTROL]+[C] at any time returns you to the Desktop.

SHAREWARE vs PD SOFTWARE

QUESTION: What's the difference between public domain software and shareware?

ANSWER: PD software is free, whereas shareware is free only if you don't use it.

With public domain software, you're not expected to pay anything for it. (You may pay a small fee - say $6 - to a company for a disk of PD programs, but that fee isn't considered payment for the programs. It's supposedly just for the disk, the packaging, and the trouble involved in duplicating and distributing the disk.)

Shareware, on the other hand, is not really free. Although it's acquired from the same sources as PD software and is meant to be passed around, a shareware author trusts you to pay him for the program if you like it. If, after trying the program out, you end up using it regularly, you send some money to the programmer. The information about how much to send, and where to send it, is included with the program's instructions.

QUESTION: How do I find out who sells public domain disks through the mail?

ANSWER: One of the best ways is to buy a copy of *Computer Shopper*. In the back of the magazine there's a section containing classified ads covering Atari products, and you can usually find about ten companies listed there which offer PD disks.

Additionally, some computer magazines offer disks themselves. For instance, *Current Notes* maintains an extensive library of disks which

can be ordered regardless of whether you're a subscriber to the magazine or not. *ST Informer* is another magazine that offers disks.

MISCELLANEOUS NOTES

1. Although public domain software is free for the asking by calling up a BBS, there may be some advantages in purchasing a disk of PD software from one of the companies which specialize in its distribution. In theory, such companies screen the programs before they include them on a disk, thereby weeding out those programs which don't run, or which are close to useless. Contrasted with this, the programs on an average BBS range from excellent to poor in quality, and it's discouraging to spend twenty minutes downloading a few programs, only to discover that one or more of them don't work.

   Additionally, if there's not a good BBS in your local telephone area, the cost of downloading programs from an out-of-town BBS will make purchasing mail order disks more attractive.

CHAPTER TWELVE

PRINTERS

QUESTION: What kind of printers will work with the ST?

ANSWER: In general, most parallel printers that work with the IBM PC computer should work with your ST. (I'll explain what parallel means shortly.) Epson, Brother, C.Itoh, Okidata, Star Micronics and Panasonic printers are popular with ST owners, and the SMM804 printer from Atari would make a fine choice, too, since software developers are bound to support it.

The owner's manual for the Mega ST states, "The printer port is an industry-standard parallel interface, so almost any parallel printer can be attached here." However, the matter may not be quite so simple.

A note in the September 1986 issue of *ST Log* magazine (page 53) advises that you "avoid any printer advertising itself as 'IBM compatible.' The ST wants its printer to be Epson compatible, which isn't the same thing." The article proceeds to explain that, although either type of printer should be able to produce text with no problem, an "IBM compatible" printer might not be capable of producing graphics properly. Possible problems are "random garbage or misalignments in your graphics dumps, and/or white spaces between each line of graphics."

If you have a question about whether a particular printer will work, it'd be advisable to actually see the printer hooked up to an ST, and working, before you buy it. You can do this by visiting an Atari dealer or by contacting an Atari users' group.

In fact, if you're considering buying an off-beat printer, you might want to look at the software you plan to use, before you buy the printer. Try the software out, read the instruction manual, or call the technical support department of the software company, in order to determine if a printer driver exists for that printer. If it doesn't, and you can't create one by yourself (doing so can often be very difficult) you may not be able to access that printer's special features, although you probalby will be able to use the printer for printing text.

CABLES

QUESTION: What kind of printer cable should I use?

ANSWER: Assuming you're using a parallel printer, get an IBM-style DB-25 (male) to Centronics cable. This type of cable is used on the IBM XT computers, and can be purchased at most computer stores or from almost any mail order computer house.

PARALLEL vs SERIAL PRINTERS

QUESTION: Should I get a parallel or a serial printer?

ANSWER: Although the ST can be connected to either a parallel or serial printer, which type you should get will depend on a number of factors. In general, however, a parallel printer seems to be the best choice for most people.

SERIAL PRINTERS are connected to the Modem port of the ST with a cable that has a "RS232" connector on the printer end. An advantage of using a serial printer is that you'll be able to use a longer cable, and thus could place your printer farther away from the computer. Whereas parallel printer cables usually can't be longer than 12 feet, a serial cable can be at least 50 feet long, and in practice, it might even be possible to use a cable up to 200 feet long.

PARALLEL PRINTERS are connected to the Printer port of the ST with a cable that has a "Centronics" plug on the printer end. There are a number of advantages in using a parallel printer.

ADVANTAGES OF PARALLEL PRINTERS

1. Connecting a cable to a parallel printer is easy, since a standard cable (the Centronics cable) is used on all parallel printers. Contrasted with this, connecting a cable to a serial printer may be easy, or difficult, or very difficult. Although the RS232 *port* is industry standard, companies producing serial printers haven't agreed upon a standard for *connecting* to a computer's RS232 port.

2. Parallel printers are more common than serial printers, so there's a wider selection from which to choose.

3. In order to use a modem, you must connect it to the Modem port. Therefore, if you buy a serial printer (which also uses the

Modem port) you'll have to either disconnect the printer or the modem while you use the other, or else buy an A-B switchover box. (Such a box allows you to select between two output devices which are connected to the same port.)

4. A few pieces of software assume that your printer is connected to the (parallel) Printer port, which means you can't use a serial printer. However, this is not a frequent occurrence.

DOT-MATRIX vs DAISYWHEEL

QUESTION: Should I buy a dot-matrix or a daisywheel printer?

ANSWER: That depends on what you'll be using the computer for. Dot-matrix printers tend to be cheaper and are more popular than daisywheel printers. Beyond this, there are two major advantages of dot-matrix printers. First, most dot-matrix printers can produce both text and graphics (including screen dumps), whereas daisywheel printers can only produce text. Second, dot-matrix printers are usually much faster than daisywheel printers.

On the other hand, daisywheel printers create a much higher quality print than dot-matrix printers, with an output equal to or better than a high-quality typewriter.

If you want to be able to print graphics or documents containing different sizes of type, you should get a dot-matrix printer. If, however, you're planning to use your ST almost exclusively for top-quality word processing jobs, you should get a daisywheel printer.

QUESTION: I can't decide whether to get a dot-matrix or a daisywheel printer, since I'd like to be able to not only print graphics, but also to create perfect business letters.

ANSWER: If you're not willing to spend the money required for a laser printer, (which would allow you to print graphics *and* high quality letters), consider buying both a daisywheel and a dot-matrix. I did this, getting as my first printer a fast (120 CPS) dot-matrix Panasonic. Later I bought a cheap ($129) but slow (11 CPS) new daisywheel which I saw advertised in *Computer Shopper*. Since they're both paralled printers, I use an A-B switch box to select which printer to use.

ADITIONAL FEATURES TO LOOK FOR

Here are some additional things to consider before buying either a dot-matrix or a daisywheel printer:

1. RIBBON CARTRIDGE - The price of replacement ribbons varies greatly from printer to printer, with some costing as little as $4.00, and others as much as $15.00. It's a good idea, therefore, to inquire at a computer store about the replacement cost, before you buy a printer. Additionally, the cartridges on some printers last a lot longer than those on other printers. (You can often get a rough idea of how long a cartridge that comes with a printer will last by asking for and looking at the specifications sheet for the printer. Look for the capacity of the cartridge, which will probably be listed in millions of characters.)

2. TRACTOR FEED AVAILABILITY - Most, but not all, printers come with, or can be upgraded with, a tractor feed. This is a device that feeds special continuous-form paper, allowing you to print as many pages as you want at once without having to insert individual sheets of paper by hand. If you're buying a dot-matrix printer, you'll want to make sure it comes with, or can be fitted with, a tractor feed.

3. TRACTOR FEED POSITION - Some tractor feeds push the paper, others pull the paper around the platen. I'd avoid a printer with a pull tractor, since it will result in the loss of one sheet of paper each time you print.

4. SPEED - You'll want to buy the fastest printer you can afford. Printer speed is measured in characters per second (CPS) and should be listed on the printer's spec sheet, but this measurement can be quite misleading. When a company states that its printer can, for instance, print at 120 CPS, this often doesn't take into consideration the time it takes to advance the paper at the end of the line, or for the print head to re-align itself. Additionally, in mono-directional printers (those which only print from left to right) the CPS rating may also not include the amount of time it takes for the print head to return to the position where it can start the next line.

5. EPSON COMPATIBILITY - I don't want to suggest that you only buy an Epson printer. After all, I bought a Panasonic printer for my ST. However, the further away you get from Epson compatibility, the greater your chances of running into a problem with some pieces of software. Note, though, that many non-Epson printers (such as some of the Panasonics) emulate an

Epson printer, and therefore may be as good as, or almost as good as, an Epson, from the standpoint of printer driver availability. If you're buying an offbeat brand, make sure the software you plan to use contains a printer driver that can access that printer's special features.

6. CARRIAGE WIDTH - Some printers have wider carriages than others, allowing you to print on wider paper. If you're willing to pay a little bit more for a printer with a wide carriage (132 characters is typical), you'll be able to print out very wide spreadsheets and database reports. However, for the average user, the narrower (around 80 characters) carriage should be adequate.

7. SHEET FEED - If you plan to be printing on lots of individual sheets of paper, you may want to purchase, either initially with your printer, or later, a sheet feeder. This is a device into which you put a whole stack of pieces of paper, and which automatically feeds into your printer one sheet at a time. It's a very useful attachment if you plan, for instance, to be producing lots of letters, or to be printing all the documents for a law office. If you suspect that you'll be doing this kind of work, determine if a sheet feeder is available for your printer, and how much it costs, before you buy the printer. For the average user, however, a tractor feed is much more useful than a sheet feeder.

A MOST IMPORTANT WARNING

No matter what kind of printer you have, do *not* connect or disconnect its cable from your computer with the computer and/or the printer turned on.

This is serious. In fact, if you like your ST, you may want to go back and read the previous paragraph again, and let it sink in. Here's why.

It is very easy to burn out part of your ST's delicate circuitry by inserting or removing a cable when the power's on. Some of the pins on the ends of cables carry electrical charges, and these pins can easily short out with other pins or sockets when the cables are connected or disconnected. (The March 1987 issue of *ST Log* contained an article entitled "ST Nightmare Repair," which described the difficult task of repairing the ST's printer interface. The article's author had destroyed the interface by changing cables when the power was on.)

It's strange, but even people who know this rule sometimes are the worst offenders. I know a guy who has worked with computers for years - he's an electrical engineer, no less - who destroyed part of his $3,000 laser printer by unplugging its cable from the computer when it was on. It would have taken him only two seconds to turn off the printer and computer, but because he didn't, his business was held up for four days while the printer was repaired.

Even if you only have a $100 used printer, don't risk destroying it, or your ST. Turn the power off before you pull or push.

ACCESSING YOUR PRINTER'S SPECIAL FEATURES

QUESTION: My word processor lets me use a few special printing effects, such as underlining, bold, etc. However, the owner's manual for my printer indicates that I should be able to access other features, such as elongated print, compressed print, international character sets, etc. How do I get my printer to do these things?

ANSWER: One way to access these features is to use a word processor which is capable of sending special printer codes to your printer. Sending these codes is often referred to as "embedding control codes into text."

Not all word processors allow for control codes. If your word processor is one of those, such as 1ST WORD, which doesn't, then you'll be limited to only a few of your printer's special effects. You'll have to make do with boldface, underlining, italics, and possibly one or two other special effects.

However, if your word processor permits control codes, you'll be able to take advantage of all of your printer's features. There may still be a problem, however. *How* to use control codes is often not explained very well, if it's explained at all. Here's why.

Different printers may require different control codes, even for the same feature. For instance, although the codes "27,31" will cause an Okidata printer to print in double width mode, in order to do the same thing on a Star or Epson printer, you'd need to send "27,87,1".

Similarly, one word processor may require a code to be typed a particular way, while another may want that same code typed in a slightly different way. We'll see examples of this below.

Because of this lack of standardization in both printers and word processors, you seldom run across a good general explanation of how to send control codes. The owner's manual that came with your ST doesn't deal with the subject, since its writer didn't know what printer or word processor you'd be using. Similarly, if you're a novice, your printer's manual probably doesn't contain a thorough enough explanation to get you started, since its writer didn't know what computer or word processor you'd have. Finally, the writer of your word processor's manual didn't know what kind of printer you'd have.

I'm going to attempt to shed some light on the subject by telling you how I send control codes to my printer. Even if you have a different printer than I do, or are using a different word processor, you may be able to get the general idea by seeing what I do.

LOOKING AT A PRINTER MANUAL

The first printer I bought was a Panasonic KX-1092. Looking at its manual, I found that it was capable of producing double width (elongated) characters. However, all that the manual had to say about this special feature was:

Name: ESC+SO

Code: 27,14 DEC 1B,0E HEX

Input format: LPRINT CHR$(27)+CHR$(14);

When you look at the section of your printer's manual that deals with double width characters, it may look a little different than this. But it probably has a "DEC" (decimal) number, and this is often all you really need to be concerned with.

Stated simply, what my printer manual told me was that the decimal control code to cause one line to be printed in double width is **27,14.**

USING CODES IN THREE SPECIFIC PROGRAMS

There are a number of programs for the ST which allow insertion of control codes into a document. One of those is Regent Word II. Unfortunately, Regent Word II's owner's manual doesn't explain how to embed these codes. In fact, the only way that I discovered

how to do it was by pressing the [HELP] key from within the program. The resultant window said that

Control X = Printer Code

What this means is that, if I want a Regent Word II document to contain a line that's going to be printed in some special way, I have to press [Control]+[X]. When I do that, a little PC image appears on the screen, letting me know that what follows will be a printer code.

So with Regent Word II, to turn on double width printing, I type

[Control]+[X]27[Control]+[X]14

Note that with Regent Word II, I must use the [Control]+[X] command not only at the beginning of a control code, but also whenever a comma occurs as part of the control code.

If I'm using the Word Writer word processor with my Panasonic printer, I'll want to send the same code in order to print in double width, but the way in which I embed the code is slightly different.

I first have to key in

P/27,14

then press the [F6] function key. The "P/27,14" disappears and I can type in the text that I want to be double width.

From VIP Professional (a Lotus 1-2-3 clone for the Atari ST) I key in the commands /PPOS, then the following characters:

\027\014

NOT ALWAYS SO EASY

Whereas my printer's manual conveniently listed the decimal values for each print style, you may not be so lucky. With the manuals for some printers, you may have to make some conversions. For example, if your manual doesn't list decimal codes, but instead, lists codes that contain letters from A to F, this is the hexadecimal form of the printer command, and you'll want to convert this into a decimal sequence.

An easy way to do this is to use one of the public domain programs which accomplish decimal to hexadecimal conversions. Alternately,

your printer manual itself may have a conversion chart. A third way is to refer to the *ST Basic Sourcebook* which came with your ST purchase.

St Basic Sourcebook Conversions

Appendix E of your *ST BASIC Sourcebook* contains a conversion chart with which you can convert a non-decimal code into its decimal equivilent (and vice versa). For example, if your printer's manual says only that 1B,0E turns on double width printing, use the table to convert this hexadecimal sequence into its equivilent decimal value. Let's run through the steps necessary for this conversion.

Since 1B,0E is a multi-byte control code (as contrasted with a single-byte control code such as, say, 0D) we'll take the first byte (the 1B) and convert it, then convert the second byte (the 0E).

To start, locate the first value of the first byte (the 1) in the horizontal "hexadecimal value" row, then look in the horizontal "decimal value" row to find the number that corresponds to hexadecimal 1. (In this case, the corresponding decimal value is 16.) Next, locate the second value of the 1st byte (the B) in the vertical "hecadecimal value" column, then look in the vertical "decimal value" column to find the number that corresponds to hexadecimal B. (In this case, the corresponding decimal value is 11.) Now, add these two decimal values together (16+11=27) to get the equivilent of hexadecimal 1B.

Do the same for the second byte of the code (i.e., the 0E). Locate the first value of the second byte (the Roman numeral 0) in the horizontal "hexadecimal value" row, then look in the horizontal "decimal value" row to find the number that corresponds to hexadecimal 0. (In this case, the corresponding decimal value is 0.) Next, locate the second value of the second byte (the E) in the vertical "hecadecimal value" column, then look in the vertical "decimal value" column to find the number that corresponds to hexadecimal E. (In this case, the corresponding decimal value is 14.) Now, add these two decimal values together (0+14=14) to get the equivilent of hexadecimal 0E. In other words, the *Basic Sourcebook's* table has shown us that hexadecimal 1B,0E is equivilent to decimal 27,14.

ASCII TO DECIMAL

Now let's assume that you've bought a second printer, on which you'd like to print a document in pica pitch. However, when you look in the printer manual you discover that, instead of conveniently

giving you a decimal control code, you're instructed to send ESC+P to your printer. That's not a problem, though, since the *ST Sourcebook* can also be used to convert an ASCII code into decimal. Here's how to do it.

First, look at the main body of the character set table (as contrasted with the decimal and hexadecimal rows and columns that we used earlier) and locate the ESC character. (In the table, the escape character looks like a capital E with it little C hanging down from it). Run your finger straight up until you reach the horizontal "decimal value" row, where you'll find the value listed as 16. Now return to the escape character and run your finger straight to the left until you reach the vertical "decimal value" column. This time the listed value is 11. Finally, add these two values together (16+11=27). What we've discovered is that ESC, in ASCII, is represented in decimal by the number 27.

Now let's do the same thing with the second byte of the ASCII code. Locate the capital letter P, then run your finger up and find the equivilent decimal value. (In this case, it is 80.) Next, return to the letter P and run your finger to the left to find the equivilent decimal value. (In this case it is 0.) Now add these two values together (80+0=80.) This tells us that ASCII P is equal to decimal 80. And thus, the decimal equivilent of ESC+P is 27,80.

A $30 PRINTER

QUESTION: I've seen liquidation ads for a $29.95 dot-matrix printer originally manufactured by Canon for the IBM PC Jr. Would this work with my ST, and would it be a good buy?

ANSWER: Although the PC Jr used a different cable than the IBM XT, you could probably hook this printer up and use it. (The ads I've seen also sell connectors for the XT.) But whether you'd want the printer is another matter. This is a thermal printer, and for many people its disadvantages may outweigh its advantages. The main drawback to a thermal printer is that you can't use ordinary paper in it. You need to buy special paper for it, usually available only in rolls. Moreover, the paper is often hard to find and is more expensive than regular tractor-feed paper. It has a coating on it, too, which makes the paper objectionable to some people for business correspondence.

So although a $29.95 printer sounds like a bargain, it won't be if you'll have to send away for rolls of paper, and end up spending more money in the long run.

There is, however, a potentially significant advantage in thermal printers. They're quiet. So quiet, in fact, that these non-impact printers are sometimes used by people who want to continue working at night without disturbing others who are nearby.

TYPE OF MONITOR USED

QUESTION: If I have a black and white monitor instead of a color monitor, will a screen dump to my printer be printed more sharply?

ANSWER: No. Although the image produced by a B&W monitor definitely is sharper than that of a color monitor, the signals sent to the printer are not affected by the resolution you're in.

PRINTER PROBLEMS

QUESTION: My printer abruptly stopped printing.

ANSWER: Check the cable connections, the switches on your printer, the printer's power cord, the fuse in the printer, and the ribbon cartridge. If the cartridge has wound to its end, this may stop the printing.

QUESTION: My printer used to work properly, but now it's printing garbage characters. Is there some way I can determine whether my word processor's printer driver has become corrupted, or whether the problem is with the printer?

ANSWER: Yes. Exit your word processor and, from the Desktop, double-click on a text file, then choose PRINT. Since printing from the Desktop does not utilize your word processor's printer driver, if the text is printed out properly, this indicates that your printer is all right.

QUESTION: OK, I've tried that, but I still get garbage characters when printing from the Desktop.

ANSWER: Although it's possible that the fault is with your printer, it's more likely that your printer cable is bad.

CHECKING FOR A FAULTY CABLE

Here's how to determine whether your printer cable is the cause of printing problems:

1. Refer to the manual for your printer to see if it's possible to perform a "self-test" of the printer. This is a method of causing

your printer to print out a complete set of characters as a test, independently of your computer and the cable. If the self-test is OK, direct your attention to the cable.

A SELF-TEST TIP - When you perform the self-test, don't insert the paper in the printer the way it usually is positioned. For instance, if you're using 8 1/2 x 11-inch paper, don't have it positioned vertically, as you would position a letter. This is because a printer's self-test will often print in lines that are longer than the width of whatever size paper is commonly used in that printer. The result will be that the self-test will continue beyond the right edge of the paper, which won't be good for the platen. To avoid this, insert the paper so its longer edge is horizontal and is completely covering the platen.

2. Turn off the power to both your computer and the printer. Then disconnect the printer cable at both ends and look at both ends for suspicious conditions: leads hanging by their solder connections, frayed wires, broken insulation, corrosion on terminals, etc.

3. If the cable looks OK, as well as the ports on both the computer and printer, reconnect everything and try printing from the Desktop again. If it now prints properly, the problem may have been caused by a slight amount of corrosion on one of the leads. If so, the mere act of unplugging and replugging the cable may have "polished up" the lead.

4. If the printing problem still exists, try another cable. Either borrow one from a friend or from a computer dealer.

CHAPTER THIRTEEN

MODEMS and TELECOMMUNICATIONS

When I bought my ST, I had no intention of ever buying a modem. I felt that connecting a computer to a telephone appealed mainly to teenagers wanting to broadcast four letter words across the nation, or to people who could afford to run up huge credit card bills on Compuserve or the Source.

Then an unexpected thing happened. An editor at a publishing company called with a proposal that I write part of a book on hotels. After we had come to an agreement, he concluded with a remark that caught me off guard.

"There's one other thing," he said. "We're behind schedule, so I'd like you to send me the copy over the phone. You have a modem, don't you?" I fibbed "Yes," then bought one the next day.

In addition to making me some money, that $80 modem served as my introduction to the exciting, but initially confusing, world of telecommunications. I soon discovered that, with a modem, I could receive free programs for my ST, obtain stock quotes, check weather reports for Colorado ski resorts, read or make copies of magazine and newspaper articles, and much, much more.

But since you may still be as confused and uninformed about telecomputing as I initially was, let's cover some of the most frequently asked questions about telecommunications.

QUESTION: What is a modem?

ANSWER: A modem is a piece of hardware that allows your computer to communicate with other computers, using an ordinary telephone line. It's typically a box a little smaller than a disk drive, with cables to both your ST's serial port and your telephone line.

QUESTION: Why would I want one?

ANSWER: There are at least four possible reasons:

1. Fun. It's exciting and enjoyable to use your ST to talk to someone sitting at another computer, or to an unattended computer.

2. Free programs. There are more than a thousand free public domain programs that you can receive over the phone. (See Chapter 11.)

3. Information. With a modem, you can receive almost any kind of information you'd want.

4. File transfer. You can send, or receive, word processing, spreadsheet, or other data files to another computer at a different location.

BUYING A MODEM

QUESTION: What modems will work on the ST?

ANSWER: Almost any modem which connects to the industry-standard RS-232 port on the back of your ST will do. However, you'll want an external, stand-alone modem, as contrasted with an internal modem. The latter are usually designed to fit in one of the slots inside an IBM-type computer, and aren't appropriate for an ST.

QUESTION: Are 300 baud modems, which sell for less than the higher baud units, OK?

ANSWER: Yes, but they're being replaced by 1200 and 2400 baud units. Baud rate is a measure of how quickly a modem sends and receives information. Therefore, if price is not a consideration in buying a modem, buy one with the highest baud rate you can afford. But even if you are on a tight budget, take into consideration more than just the initial cost of the modem. The higher the baud rate of your modem, the more quickly you'll be able to receive information or files from a remote computer. This will translate into less time on the phone, and smaller phone bills.

QUESTION: Should I spend more money for a 100% Hayes-compatible modem?

ANSWER: Not necessarily. Although such a modem recognizes more commands than one that isn't totally Hayes-compatible, the average user may be able to get along perfectly well with one of the

cheaper modems. I'm pleased with the Avatex 1200 modem I use, even though Avatex now makes a 1200HC model that has more "Hayes-compatiblity." The more expensive units use the AT, or Hayes, command set, which consists of a number of basic commands, as well as an extneded set of commands known as the extended AT command set. The cheaper units use the same basic commands, but may lack some of the extended commands. But you may not need all of the extended commands.

QUESTION: Which should I buy first, a modem or the tel-com software?

ANSWER: Ideally, the software. The best thing to do is to talk to members of an atari user's group and ask what software programs they like. Then choose one of those programs, but before you buy a particular modem, call the software manufacturer to determine whether their program will work with that modem.

QUESTION: What sort of cable should I get?

ANSWER: To be on the safe side, pose this question to the modem's manufacturer or to the dealer where you're buying the modem. However, you'll probably find, as I did, that the same kind of "straight-through" cable which connects an IBM to an external modem will work with your ST.

QUESTION: Should I try to construct my own cable?

ANSWER: If you want to, go ahead, but attempt it only if you're adept at soldering tiny wires. I made my own cable, but later concluded that the effort hadn't been worth it. The parts to make the cable cost me about $10.00 from Radio Shack, and the project took about an hour of soldering and testing. I then discovered that I could have bought a new, assembled cable for $6.00 through the mail.

QUESTION: If I call up a bulletin board that has programs for other computers, will I be able to download something (such as an IBM program) and run it on my ST?

ANSWER: No, not unless you've got one of the special IBM emulators (or Macintosh emulators, etc.) for your ST, such as pc-ditto (from Avant-Guard Systems), Magic Sac (from Data Pacific), etc.

QUESTION: Without one of these special emulators, is there any communicating I can do with a non-ST computer?

ANSWER: Yes. Even though only those programs written for the ST will run on your computer, you can nevertheless *communicate* with a non-ST computer with a modem, and can send and receive *text files* between your ST and any other computer.

QUESTION: How do you transfer text files?

ANSWER: Even though the ST has its own proprietary operating system, and therefore can't run programs which are written for another type of computer, ASCII text files from the ST can nevertheless be used by another computer, and vice versa. It was this fact which allowed me to transfer my writing on hotels to the editor, even though his office used IBM computers exclusively.

I did my writing with Atari's 1st Word word processor, then switched off the "WP mode" when I was through, thus saving my document in ASCII format. (An ASCII text file is one which contains only characters; it's a generic file which lacks the special formatting instructions produced by a word processor.) In this same way, you can transfer a letter, an article, a book - in fact, a text file of any length and content - to any other computer, whether it's an AT&T, a Macintosh, or whatever.

QUESTION: If I have an ST at home and an IBM or a Mac at work, will a modem allow me to continue my work at home?

ANSWER: Yes. As long as you've got a modem at work and another modem at home, you'll be able to transfer ASCII text files between the two computers.

QUESTION: Is there any way of transferring files from my computer at work to my ST at home (or vice versa) that doesn't require two people? It'd be easier if I could do it by myself.

ANSWER: Yes. The Interlink ST telecommunications software (from Intersect Software) has an answer mode which allows remote access to your ST from another computer. Actually, this feature provides limited BBS capability, since a remote caller can copy, rename, delete, download, upload, show info and print to the screen any files that are on any of your ST's drives. Three levels of access are provided, each with its own password. After putting Interlink in its answer mode and keeping your ST on, you can leave home and go to work, or wherever another computer/modem setup exists. Then dial up your ST and download or upload files.

QUESTION: Can I use a modem without having to acquire any new software?

ANSWER: Yes, and no. The VT-52 terminal emulator, which is loaded as an ST desk accessory, is fine for simply "talking" to another computer, but it won't allow you to send or receive files. Therefore, you'll want to acquire one of the other public domain telecommunications programs, or one of the commercial software packages such as Flash (from Antic), Interlink ST, Zaphodyne/vtx (from Zaphodyne, Inc.), etc.

QUESTION: Where do I get the VT-52 terminal emulator?

ANSWER: It's a public domain program that was part of the free software package which used to come with the purchase of an ST. If you received a Language Disk when you bought your ST, look on it and you'll find a file called EMULATOR.ACC. That's the VT-52 terminal emulator. If you never got the program, or lost it, you can get a copy of it from a user's group member, or you can have a friend download it for you from one of the many Atari ST BBSs.

QUESTION: I've already purchased a commercial tel-com program. Do I need to load the VT-52 terminal emulator and use it to choose the proper settings before I run my tel-com program?

ANSWER: No. It's unlikely that any of the settings in the RS232 CONFIG box will need to be set, since all these parameters will probably be set by your tel-com package. In fact, you may want to remove the EMULATOR.ACC from your boot disk altogether. This will free up two desk accessory slots - VT-52 and SET RS232 CONFIG.

QUESTION: What's a terminal program?

ANSWER: It's the software that allows your ST to use a modem and a phone line to communicate with other computers.

QUESTION: Is a terminal program the same thing as telecommunications software?

ANSWER: Yes. In fact, there are a number of other synonyms for these two phrases: modem software package, terminal emulator, communications package, comms package, or tel-com software.

QUESTION: Do I have to buy a modem that contains its own speaker? Modems seem to cost more if they've got one.

ANSWER: A modem without a speaker is OK, but it's a little harder to use. A speaker is useful in letting you know what's going on. With one, you'll be able to easily know whether the phone on the other end of the line is ringing, whether the other modem has

answered the phone and sent its answer tone, etc. However, if your modem doesn't have a speaker, you can still determine these things by physically picking up the handset of a nearby phone and listening in.

QUESTION: I do that sometimes, but often I then can't get the two computers to start communicating.

ANSWER: You're probably listening with the receiver too long. The moment you hear the remote system send its tone, hang up the receiver. Otherwise you may create sufficient interference, or dilute the target computer's signal, so as to prevent the two computers from connecting.

QUESTION: Do I need to get a special kind of telephone line to use a modem?

ANSWER: No. You can use your regular home or business phone, provided it's a single user line, as contrasted with a party line. If you had a party line, some data would be lost whenever anyone else picked up a phone.

QUESTION: My phone has call waiting. Can I use a modem?

ANSWER: No, not unless you turn it off. Otherwise, whenever a regular caller tries to reach you, your modem transmissions will be temporarily interrupted or corrupted.

QUESTION: How do I know what parameters to choose?

ANSWER: If you use the "standard parameters," you'll be able to log onto most boards. Try 8 bits, full duplex, 1 stop bit, no parity and your modem set to originate. Don't worry if you don't understand what these things mean. All you need to know is what to set the parameters to, and how to set them. It's just like a car: you don't need to know what goes on inside the transmission, as long as you know how to shift.

SOME PROBLEMS & THEIR SOLUTIONS

QUESTION: I've just bought a modem, hooked it up, and read its manual, as well as the manual for my telecommunications software. However, when I instruct my software to dial a telephone number, nothing happens. It doesn't even seem to be dialing anything.

ANSWER: First, confirm whether or not your modem *is* dialing. Try telling it to dial the number of a friend. (He doesn't even have to

have a modem or a computer.) Then call your friend by using the phone in the conventional manner (i.e., without the modem or the computer) and ask whether his phone rang. If it didn't:

1. Check to see if one of the physical links has failed. Look at the cables connecting the computer to the modem, the modem to the phone line, and the power cord.

2. Determine whether you've instructed your software to send the proper dial command to your modem. To find out what this should be, look at your modem's manual. Remember, if you're paying your phone company for only the cheaper "pulse" type service , you should't be sending a dial command meant for "tone" type service. For instance, I have to send my Avatex 1200 modem an "ATDP" command, since I have pulse service. If I had tone service, I would send an "ATDT" command. (If you're unsure whether you have pulse or tone service, look at your phone. If it's a rotary dial unit, you probably have pulse service; if it's a push button unit, you may have either pulse *or* tone service. If you can't determine what you've got, call the business office of your telephone company and ask.)

3. Determine whether you've told your software to send the proper initialization command to your modem. Look at your modem's manual to find out what this should be. With my modem, the proper command is "ATZ [Return]".

4. If you're still not sure whether you're sending the proper dial and initialization commands to your modem, try using the VT-52 desk accessory emulator instead of whatever other software you've been using. Since this desk accessory is very easy to operate, using it can eliminate the possibility that you haven't figured out how to configure your software so it sends the proper commands to the modem.

   With the VT-52 installed, press [Help], then choose the same baud rate that your modem is set at. Mouse-click on the "OK" box and when the terminal screen appears, press [Return]. The word "ERROR" should appear on the screen, indicating that your modem is, in fact, hooked up. It says "ERROR" because the mree act of pressing [Return] didn't send a command that the modem could process.

   Now type the following: "ATZ [Return]". The black flashing cursor should jump down a line, then after about a one-second pause, the cursor should jump down another line and a greater-than character (>) should appear. Note that the "ATZ" must be typed in upper case letters. If you type a command in lower

case, you'll get the "ERROR" response. Note, too, that you should be typing the "ATZ" without the open and close quotes.

Next, type: "ATDP (telephone number) [Return]". (The telephone number you dial can be any number, even that of your own telephone which is hooked up to the modem.)

The modem should now dial the number, and, depending on what kind of telephone unit you have, you may actually be able to hear clicks as the number is dialed. In any event, physically pick up the handset of a phone which is connected to the same line that your modem is hooked up to. You should hear the number being dialed.

QUESTION: When using the VT-52 emulator, is there any way to bring about a line feed without also causing a carriage return?

ANSWER: Yes. Press [Control]+[Return].

TONE GOTTEN, BUT NOTHING ELSE

QUESTION: After successfully dialing another computer and getting its tone, nothing happens.

ANSWER: You have to signal to the other computer that you're ready. To do this, hit the [Return] key once or twice. (Three times, if necessary.)

QUESTION: The screen still remains blank.

ANSWER: The remote system may be operating at a different speed. Try changing baud rate.

QUESTION: The screen still remains blank.

ANSWER: Your modem, as well as that of the remote system, may be in the answer mode (or both may be in the originate mode). Try changing your computer's mode from answer to originate (or vice versa). Consult your modem's manual if you're unsure how to do this.

GARBAGE CHARACTERS

QUESTION: My screen is filled with garbage characters (random characters).

ANSWER: Data formats may be different on the two systems. Try changing: (1) parity, (even/odd), or (2) stop and start bits, or (3) 7- or 8-bit characters. If still not corrected, the remote computer may be at different speed: try changing baud rate (300, 1200, 2400, etc.).

QUESTION: No matter what I type, every character appears twice on the screen. For example, I type "john", but "jjoohhnn" or jJoOhHnN" appears.

ANSWER: You're in half-duplex and the remote computer is echoing your characters back to you. Change to full-duplex with echo off. Note, however, that this double character effect occurs only with what *you* type; the characters sent by the other system are normal.

QUESTION: When I type, nothing appears on the screen.

ANSWER: Try switching to half-duplex.

QUESTION: Everything that appears on my screen is on one line, and when the cursor gets to the end of the line, it starts at the beginning of the *same line*, overwriting the previous words.

ANSWER: The other system isn't sending carriage returns. Instruct your software to send carriage returns, or toggle your linefeed setting.

TOO MUCH SPACE BETWEEN LINES

QUESTION: Wide spaces occur between the lines that are displayed on my monitor.

ANSWER: The other computer *is* sending carriage returns, but so is yours. Turn off your carriage returns, or toggle off linefeeds.

QUESTION: The data that's been sent from the remote computer looks fine on my screen, but when I try to print it out, weird things happen: sometimes garbage characters appear, other times the printer overprints.

ANSWER: The remote computer is sending special control characters which are instructing your printer to do certain things: backspace, execute a line feed, print in double density, etc. These special control characters aren't displayed on your screen, in the same way that a word processor's special codes aren't displayed. Try enabling line feeds, or fool with the printer's DIP switches.

QUESTION: The remote computer is sending stuff that I'm not interested in (a file, or text). Can I cancel the transmission?

ANSWER: Try sending [Control]+[S]. If this doesn't work, try [Control]+[L], or [Control]+[L] twice, quickly in succession.

HOW TO LOCATE BULLETIN BOARDS

QUESTION: How do I find out the telephone numbers of BBSs?

ANSWER: There are a number of ways. First, *Computer Shopper*, the monthly magazine, has an up-to-date list of BBSs, with notations of which ones are ST boards. Another way to find boards is to ask at a users' group meeting. Additionally, most BBSs contain lists of other BBSs, so once you've called your first board, you shouldn't have trouble finding others.

The Atari Corporation in California operates its own BBS, which can be reached at (408) 745-5308. The telephone number for Atari's board in England is 0753 823925. (From the States, dial 011 44 753 823925 and set your modem to 300 baud.)

CHAPTER FOURTEEN

WORD PROCESSORS

QUESTION: Sometimes when I try to save a document I've just created in my word processor, I get a message that the disk doesn't have sufficient space to store the file. What should I do?

ANSWER: You have at least four options:

1. Eject the full disk and replace it with another, less-full disk or with a formatted empty disk.

2. If you don't have a formatted disk, create one. You can do this from within your word processor, of course, only if your word processor provides for formatting of disks, or if one of the special desk accessories that allows for formatting is already installed.

3. Delete files. If your word processor is one of those that permits deletion of files - such as 1st Word or 1ST WORD PLUS - select and delete one or more files that are less important than the file you're trying to save.

4. Save the file to a RAM disk. (This assumes, of course, that you've got a RAM disk already installed.)

5. If all else fails, print out the file so that you'll at least have a hard copy of the document after you exit the word processor. If you don't have a printer, you may want to copy the text down by hand. (I've done this a number of times after a bug in a word processor has locked up my ST's system. Every time this happens I vow to myself that I'll save to disk more often.)

QUESTION: What's the best word processor for the ST?

ANSWER: I'm not even going to try to answer that question, except indirectly. There are four reasons why.

1. Although a given word processor might be good at a particular task (writing business letters, for example) it might not be good at other tasks. Since I don't know what projects you'll be using

a word processor for, it'd be hard for me to tailor an answer to your specific needs.

2. Two different persons, even if they're performing the same task, may prefer different word processing programs. My jewel of a word processor might be your turkey.

3. Each word processor has its own distinctive *feel*, and this may be totally independent of whether or not you like the way the program handles certain functions. You often will like, or dislike, a program for some subjective, inexplainable reason. You'll have to actually try out a word processor in order to get an idea of how it feels.

4. By the time you read this, there will likely be a whole new crop of WPs for the ST. In the same way that, if I were buying a word processor today, I wouldn't consult a two-year-old copy of *Antic* magazine to see what the "best" program is, you wouldn't want to base your choice of a word processor on a suggestion made in this book.

   So instead of saying to you, "X is the best word processor," I'll do something which will be more helpful. I'm going to discuss a number of *features* that I think should be considered by anyone in the market for a word processor. Then in Chapter 15 I'll discuss the highlights of a number of specific word processors for the ST.

DESIRABLE WORD PROCESSING FEATURES

1. CURSOR PLACEMENT WITH THE MOUSE - Most, but not all, word processors for the ST allow use of the mouse. I find the mouse indispensable in being able to quickly and easily place the cursor at a particular point on the screen. Although such cursor placement isn't needed during the initial entering of text, it's invaluable during the editing of text.

   In general, word processors for the ST can be categorized as either GEM-based or text based. The GEM-based WPs let you use the mouse for cursor placement and the text based WPs don't.

2. WHAT THE SCREEN DISPLAY LOOKS LIKE - Word processors can also be categorized according to what type of design principle they follow: WYSIWYG, or non-WYSIWYG.

WYSIWYG, which is pronounced *Wizzywig*, stands for "What You See Is What You Get", and refers to the type of word processor which attempts to display text on the screen in the same way that it will appear when it's printed out.

This means, for example, that italicized letters, indentations, tabs and other layout features will be visible on the screen, making it a lot easier to set up a document the way you want it.

Non-WYSIWYG word processors, on the other hand, don't attempt to display text the way it will appear on paper. Instead, special codes are placed in the text representing italics, indentations, etc. For example, if you wanted to italicize the word "never" in the following sentence, the monitor's display of the sentence might appear as

I shall >3+<never>3-< consent.

3. HOW FUNCTIONS ARE CHOSEN - There are a number of different functions that can usually be performed within a word processor - turning on boldface, centering text, searching for a string of text, etc. - and different WPs use different ways of letting you implement these functions. The four methods described below are the ones most commonly used. (Actually, the following four methods of choosing commands aren't just found in word processing programs. You'll also run into one or more of these methods in spreadsheets, data bases, and other types of programs.)

   A. Mouse-selecting a function from a pull-down menu - With a GEM-based word processor it's an easy job to move the mouse pointer up to the menu bar, see what options are available, then choose a function. This method is especially appreciated by beginners, since there are no special commands to remember. On the other hand, many users (including myself) find this method distracting and time consuming: you have to remove your hand from the keyboard, position the mouse, then select an option - just to perform a simple function such as centering a line.

      Additionally, some text-based WPs provide faster screen handling than some GEM-based programs, since they don't need to be constantly displaying slider bars, menus, etc. And too, a non-GEM-based WP can usually display more characters on a line (often 80) than a GEM WP, since the GEM window borders take up a number of characters.

B. Pressing a Function Key - This method of choosing functions is much easier. In 1st Word, for example, when you want to turn on the underlining feature, all you do is press the F2 function key. In fact, the function keys act as toggle keys, which means, for instance, that when you want to disable underlining, all you do is press the F2 key again. The only problem with word processors which use the function keys, of course, is that there are only ten of these keys, while there are many more than ten word processing functions to be performed.

Some word processors deal with this situation by allowing for not only the use of function keys, but also the use of function keys in combination with other keys. For instance, a program could provide the following options: pressing F4 might produce italics, pressing [Shift]+F4 might produce superscript, and pressing [Alternate]+F4 might show page breaks.

C. Pressing More Than One Key At The Same Time - As just mentioned, some programs allow you to implement a function by pressing down two or more keys at the same time. In Regent Word II, for instance, if you hold down the [Control] key, then press the [I] key, italics is turned on. Pressing the same combination a second time turns off italics. In other programs the [Alternate] key or the [Shift] key is used in the same way.

Using such key-combinations in order to implement functions can take a bit getting used to, but after that, many users prefer this method to having to mess with the mouse.

D. Responding To Menus - With this method, you choose functions from a "main menu" by pressing keys on the keyboard. For instance, in ST Writer (which uses menus for some of its commands) the main menu contains eleven functions, some of which are Delete, Quit, Save, and Format. A function is chosen by pressing the key which corresponds to the first letter of that function. If you press [D], for example, the message "File to be deleted:" appears on the bottom of the screen, allowing you to then type in a file name.

The menu method of choosing functions can get quite complicated, as evidenced by Lotus's 1-2-3 spreadsheet program (available on the ST as VIP Professional). In this program, there are layers of menus, one within the other. If you want, for example, to print something, you first press

[/], which brings up the main menu. You then press [P], which brings up the Print menu. Then you press [R], which allows you to select a Range that you want printed. Finally, you press [G], which tells the printer to Go.

4. HOW BLOCKS ARE SELECTED - A block is a section of text (a few letters, a number of words, or even many paragraphs) which is chosen and treated as a unit. Once chosen, something is done to the block, such as moving, copying, or deleting it. For instance, I could choose this paragraph to be a block, then cause all the words in it to become underlined.

   The selection of a block involves designating some point in the document as the starting point of the block, then designating another point as the ending point. In many word processors, once this beginning-and-ending selection process is complete, the block of letters will become highlighted in some manner. On monochrome monitors, the block may appear darker than non-blocked text; on color monitors, the block may change to a different color.

   Different word processors use different methods for selecting blocks, and since block selection and manipulation is such a common maneuver, it'd be good if you could find a word processor which allowed you to perform this task in a manner you find comfortable. The common ways of selecting blocks are:

   A. Using the Mouse to Create a "Rubber-Band" - In this method, the mouse pointer is positioned where you want the block to start, then the left mouse button is pressed. While continuing to hold down the mouse button, the mouse is dragged to the point where you want the block to end, and the button is released.

      When a program allows for full use of the rubber-band method, it can be the easiest way to select blocks. An example of a program with a good rubber-band capability is Microsoft Wirte. In Microsoft Write, a block can be started at any point and ended at any other point.

      Less easy to use are those programs which have a limited version of the rubber-band method. In these programs, (1st Word is a good example) if the block you want contains more than one line of text, only whole lines of text will be chosen. In other words, you won't be able to start, or end, your block anywhere in the middle of a line. This is very

annoying and limits the usefulness of the rubber-band method tremendously.

B. Using the Function Keys - Regent Word II is one of the word processors that uses this method. The mouse pointer is placed at the beginning of the block, then the F6 function key is pressed, marking the beginning of the block. The end of the block is selected by placing the mouse pointer, then pressing the F7 function key.

Some users don't find the function key method as easy to use as a well implemented rubber-band capability, but it's definitely better than the limited rubber-band method.

C. Using Keyboard Commands - In some programs, blocks can be set off by pressing certain keys on the keyboard. In TextPro, for instance, the following procedure can be used: position the mouse pointer at the block's beginning; press [Esc],[M], (for mark block); use the cursor keys to position the pointer at the end of the block; then press [Return].

D. Selection From GEM's Pull-Down Menu - Another common method involves placing the mouse pointer at the desired locations, then using the mouse to choose the Start Block, then the End Block, options from the GEM menu bar.

This method may be the best one for beginning users, since it's very straightforward and easy. However, it's a little bit slower than the function key method. I prefer the fully-implemented rubber-band method.

5. HOW BLOCKS ARE MANIPULATED - Once a block has been selected, you're ready to do something with it. You might want to move the block of text to another location in the document; move it to another document altogether; copy it to another location; delete it completely; or change the style of the characters in the block.

As with other functions, different word processors utilize different methods for manipulating blocks. In the following descriptions of three of the most common methods, it's assumed that you have already selected a block of text to be manipulated.

A. The GEM Menu Bar - The mouse pointer is used to select a function (Move, Copy, etc.) from the Menu Bar.

B. Keyboard Command - A keyboard combination is used, such as pressing [Alternate]+[C] for copy.

C. Function Key - A function key is pressed. Properly designed, this can be the easiest method of choosing a function.

Note: Some word processors provide more than one method of manipulating blocks. For instance, you may be able to choose a function from the Menu Bar, or alternately, choose that same function by performing a keyboard command.

6. CURSOR MOVEMENT - Although in many situations I like to use the mouse for cursor placement, I also like a word processor which provides a number of alternate ways to move the cursor around.

The obvious method, of course, is through manipulation of the cursor keys. All word processors that I've used - whether they've been GEM or text-based program - allow for this type of control.

But only some of the word processors now available go beyond this and provide methods for making big jumps with the cursor. Let's consider, for instance, the ability to be able to move the cursor quickly to the top, or bottom, of the document. If you've got a GEM-based word processor, you can, of course, perform one of these actions by grabbing the mouse, moving the pointer to the right hand Scroll Bar, and dragging the Scroll Box all the way up or all the way down. But that's a cumbersome way of doing it. It's much easier to merely press one key, or a combination of keys, to make the jumps.

In Regent Word II, for instance, all you do is press [Control]+[T] or [Control]+[B] to bring about these movements. It's very quick and easy, and I've come to rely on these functions so much that I'll never go back to a word processor which can't jump to the top or bottom of the document.

7. HOW EASY IS IT TO SAVE? - I'm a compulsive saver. I rarely write more than a paragraph or so without saving my writing to disk, usually a RAM disk. When you perform a function this often, two things become very important: ease of execution, and speed. Early on in my evaluation of a word processor I always ask myself, "How easy is it to to save, and how quickly can I save?"

Two factors can affect how easy it is to save: the actual motions you have to go through in order to save a document, and whether or not the act of saving closes the document.

Regent Word II employs a method that is beautifully simple. Once you've opened and named a file, all you do to save any changes or additions you've made is press the F2 function key, then hit [Return]. The other nice thing about Regent Word II's save function is that, once you've saved, you're immediately ready to continue writing. WordPerfect and Microsoft Write handle saving in a similarly easy manner.

Not all word processors are like these two programs. In 1st Word, for instance, if you're in the middle of a writing session and you want to save what you've written, here's what you have to do: (1) Use the mouse to choose Save from the File menu. In addition to saving your document, this action also closes it. Then you have to (2) choose Open from the File menu, which brings up the Item Selector box. Finally, you (3) choose your file, and wait while it's loaded.

8. HOW EASY IS IT TO PRINT? - Although I'm generally a satisfied convert to the computer age, there's one area in which I'm still sort of old fashioned. When it comes to reading what I've written, and correcting it, I feel much more comfortable if I've got a piece of paper in my hands with the words on it, rather than having to rely on words on the screen.

   Because of this, I'm a frequent printer. I rarely write more than a page of text without sending it to the printer. Partly as a result of this, and partly because of my impatience, I like a word processor which allows me to get a printing job done quickly and easily.

   Some word processors don't perform the printing process as easily as others. In 1st Word, for example, here's what I'd have to do in order to print and return to my document for further writing: (1) Use the mouse to choose Save from the Menu Bar and wait for it to be saved; (2) When the Item Selector appears, select the document that I've just saved; (3) Once the printing is finished, use the mouse to choose Open from the Menu Bar; then (4) When the Item Selector appears, choose the document and wait for it to be loaded.

9. SCREEN FORMATTING - HOW EASY IS IT? - Depending on what you'll be using a word processor for, you may not make much use of the following screen formatting capabilities: setting line spacing, tabs, and margins, and turning on and off underlining, boldface, italics. However, when you *do* want to use one of these features, it's nice to be able to perform it

without having to go through a lot of complicated keyboard or mouse convolutions.

1st Word, 1ST WORD PLUS and WordPerfect all handle underlining, boldface and italics very nicely. In WordPerfect, for instance, to turn on bold, all you do is press the F6 function key. To turn bold off, just press the same key again. It couldn't be easier. Some programs, unfortunately, require you to reach for the mouse in order to implement one of these functions.

For an example of how easily a word processor can allow you to set margins, page breaks, line spacing, headers and footers, and right, left, and center justification, take a look at the mini review of Regent Word II in Chapter 15.

10. PRINTER SUPPORT - Setting up a word processor to work with your printer can be an easy matter, provided you've got a popular printer like an Epson. But if you've got an offbeat printer, you may have to spend some time customizing a printer driver to work with your specific printer. And not everybody has the inclination or ability to carry out such customization. If you're in doubt about your printer, try to determine whether any of the printer drivers which come with the word processor you're interested in will work properly with your printer. Place a call to to the company that markets the word processor and ask them about your particular printer. (Also see Chapter 12.)

11. COPY PROTECTION - If a word processor is copy protected, it may be harder to use than one that's not copy protected. For instance, you may not be able to run it from a hard drive or a RAM disk without having to insert the master disk every time you start.

CHAPTER FIFTEEN

SPECIFIC WORD PROCESSORS

In this chapter I'll discuss some of the features that I like, and dislike, about a number of specific word processors. Be forewarned, however, that the following comments are not intended to constitute complete reviews of these programs; they merely represent what I feel are some of the good and bad features of a few of the more popular word processors.

ST WRITER

In the Public Domain

The most striking feature of this word processor is its price: it's free. Originally created by the Atari Corporation, ST Writer is available on BBSs, from users' groups and from commercial suppliers of public domain software.

Actually, there are two "editions" of ST Writer - the original non-GEM edition and the newer GEM edition. Besides price, another reason for this program's popularity is its similarity to Atari Writer, the word processor for the Atari 8-bit machines. The commands and layout of the two programs are so similar that Atari Writer users graduating to the ST feel right at home with ST Writer.

But ST Writer has a number of other things going for it, too:

1. It's fast. Moving the cursor around the screen can be accomplished very quickly, both in the non-GEM and GEM editions.

2. It allows for maximum use of the screen. You can display a full 80 character on each line, and in high resolution can select between displaying 37 or 22 lines of text.

3. It works in all three resolutions, allows insertion of printer codes, permits double column printing, can search for a bare carriage return, and takes up only 40,182 bytes of disk space.

The GEM edition isn't like most GEM programs you're familiar with. Its edit screen, in which you write and edit text, doesn't have GEM menus, although it does permit mouse-placement of the cursor; whenever you click the mouse, you're switched to the menu screen, where GEM menus, including desk accessories, are available. You have to switch back, though, to the edit screen in order to continue entering or editing text.

Disadvantages: Since the program isn't commercially marketed, the usual technical support isn't available; the GEM edition is more like a TOS program than a full-featured GEM application.

Sources of Further Information

The following articles provide tips and instructions for ST Writer: "ST Writer Secrets," Winter 1986 *Start*; "ST Writer Returns," *Start*, Fall 1987; "ST Writer Meets Its Mouse," *Start*, Winter 1987.

1st Word

Atari Corporation

The main reason 1st Word is used by so many people is that it used to be supplied free along with the purchase of every new ST. It is also, however, a pretty good basic word processor.

Advantages:

1. Low price. 1st Word has a list price of $49.95. However, if you already have a 1st Word master disk, you can upgrade to the current version (which includes a slick, 77 paged printed manual) for only $9.95 by contacting Atari's Customer Service department.

2. Ease of use. Since 1st Word is totally GEM based, even new computer users can be creating documents in a matter of minutes. No keyboard commands to remember.

3. Simultaneous display of four windows. Cut, paste and copy text between four windows.

4. Good use of function keys. Choosing bold, underline or italics couldn't be easier: just press the appropriate function key to turn the function on, then a second time to turn it off. There's even a row of ten function key icons along the bottom of the screen indicating each key's function.

5. What-You-See-Is-What-You-Get (WYSIWYG). Type styles, (underline, bold, etc.) as well as justification, are displayed on the screen exactly as they'll appear on paper.

Disadvantages:

1. No global format. After you've done some editing of a document or changed the margins or line spacing, it's impossible to reformat the entire document all at once. Instead, you have to reformat each paragraph, one paragraph at a time, by pressing the F10 function key. This is time consuming and tedious, especially if your document is long.

2. No save-and-resume option. In order to save anything you've created, you first have to quit from your document. Then after saving, if you want to continue with that document, you have to reopen it.

3. Similarly, in order to print, you first have to quit. If you're a frequent printer, like I am, the constant quitting, printing, and reopening become tiring.

4. The only way to change the left margin setting is from within the printer setup menu. There's no way to do this while you're editing a document.

5. Lack of keyboard commands. With the exception of the ten function keys, the only way to choose an option is by mouse selection. This is all right for new users, but more experienced users may find this limiting.

1st WORD PLUS

Prospero Software (in the U.S.A.)
Electric Distribution (in the U.K.)

Of all the new features in 1ST WORD PLUS, I think my favorite is the graphics mode. But even if you're not interested in integrating graphics and text in the same document, 1st WORD PLUS is a great improvement over its first incarnation, 1st Word.

In addition to retaining all of 1st Word's good features, 1ST WORD PLUS has added the following:

1. SAVE AND RESUME - The FILE menu now allows you to save the current document without closing it. Not only does this

save time, but you're now able to continue editing from the same point in your document, even after saving.

2. SPELLING CHECKER - You can choose between checking the spelling of part (or all) of a document that you've already written, or of having the spelling of your words checked as you write them.

   In either case, the 40,000 word dictionary is first loaded into memory, which means that the checking process goes quickly (500 words per minute), but also means that the amount of memory remaining may be limited, depending on the size of your system. One of the nice features is that you can check the spelling of a document starting at the cursor's location, which means you don't need to check a whole document if you don't want to. You can also use the Browse function, which allows you to quickly look at any part of the dictionary in the same way you'd thumb through a paper dictionary.

3. IMPROVED REFORMATTING - One of the complaints directed against the old 1ST WORD program was that reformatting could be done only a paragraph at a time. This meant that every time you changed one of your document's formatting features, such as spacing, margins, justification, etc., you'd have to go through the whole document and hit the F10 key for each paragraph. 1ST WORD PLUS allows you to choose whether you want to reformat a single paragraph only, the whole document, or the text between two rulers.

4. GRAPHICS MODE - This feature allows you to combine text and graphics in the same document. The graphics can be pictures from programs such as DEGAS, DEGAS Elite, Neochrome, or even one of the public domain "snapshot" programs which capture anything that's on your screen.

   Once a picture is pasted into 1ST WORD PLUS, you can use the mouse to move it around in your document, and text can be placed over the picture, or to the side or above or below the picture. Of course, you'll only be able to print a document containing graphics if your printer is capable of graphics.

5. STATISTICS - The EDIT menu now contains a Statistics option which provides you with information about your current document (the number of pages, lines, words and bytes) as well as the amount of free RAM and the amount of space remaining on any disk.

6. KEYBOARD CURSOR CONTROL - In addition to mouse control, you now have greater keyboard control over movement of the cursor. Using the arrow keys with the Shift key, you can move the cursor to the top or bottom of the screen, or to the beginning or end of a line. However, there is still no provision for jumping to the top or bottom of the document without moving your hand to the mouse.

7. EXPANDED LAYOUT MENU - In addition to 1ST WORD's familiar Page Layout window, 1ST WORD PLUS provides a number of new layout options. New rulers can be added anywhere in a document, allowing, for example, certain sections of a document to be double spaced, and other sections to be single spaced.

   Rulers can also set type styles, justification, and tabs, and you can opt not to display even the top ruler, thus freeing up an extra line for text display. Finally, a numeric representation of the cursor's position can be displayed at the top of the screen, showing page, line, and column number.

8. IMPROVED PRINTER CONTROL - A status line displays the type of printer driver that is installed, and switching to another driver can easily be done with the mouse from within the word processor. Additionally, you can mouse-click between using the parallel or serial port, something which will be appreciated by those with printers connected to both of the ports.

9. Extensive, very well written 248 page manual.

10. MISCELLANEOUS - In addition to being fully compatible with 1ST WORD document files, 1ST WORD PLUS contains hyphenation, footnote and justification options, a mail merge capability and the ability to mouse-select the following keys: CapsLock, Space, Return, Delete to the left, Delete to the right, TAB, and Fixed Space. This, coupled with the ability to mouse-select any of the function keys, makes 1ST WORD PLUS well suited to be used by handicapped persons.

    The program's main disadvantage is that its menu choices aren't accessible from the keyboard, which forces you to use the mouse.

Regent Word II

Regent Software

1. Regent Word II lets you perform 32 functions from either the function keys or Control-key combinations, while also allowing

these functions (and a number of others) to be accessed with the mouse via the GEM Menu Bar. Pressing the Help key at any time will display a list of these thirty-two keyboard commands.

2. SAVE A FILE - Once you've opened and named a file, all you have to do to save it is press F1, then hit [Return], and your product is not only saved, but you're immediately ready to continue writing. It literally doesn't take more than three seconds to perform this action. The speed is partly due to the fact that the mouse isn't used, but it's also because the act of saving doesn't close the document. (The fact that I use a RAM disk also speeds things up.)

3. AUTOMATIC REFORMATTING - Unlike some word processors which require you to press the F10 key (or do something else) in order to reformat, Regent Word II's reformatting is both automatic and instantaneous. This is especially useful during editing. When I change text that I've already written, it's nice to have the word-wrapping and reformatting occur instantaneously and automatically the moment I make my editing changes. If I delete a sentence within a paragraph, for instance, the rest of the paragraph automatically flows into the replaced part.

4. SETTING MARGINS - Regent Word II uses a very easy and quick method to set margins, page breaks, line spacing, headers and footers, and right, left, and center justification. It does this by means of "rulers," special lines which allow you to use the mouse to select a feature you want to change. A ruler can be inserted at any place in a document, and as many rulers as you want can be inserted in a document.

   If you want to alter any of these settings, first insert a ruler, then mouse-click on the appropriate area, type in your new setting, then hit [Return]. For instance, if you want to narrow your document because it's too wide, just mouse-click on the "RM=75", type in "70", then hit [Return]. The whole document, whether it's half a page or fifty pages long, is reformatted according to the new margin setting. (Assuming, that is, that this is the only margin ruler you've inserted in the document. If you've inserted multiple rulers, your change will be implemented only up to the next margin ruler.)

   In this same easy manner you can change from single to double spacing, or for that matter, to spacing of any value. Just mouse-click on the "LS=" and type in your selection.

The ability to insert multiple rulers makes complicated formatting a snap. Let's say you want two wide paragraphs, followed by one that is narrow, followed by a double spaced, right justified one; all you do is insert a new ruler wherever you want a change. It's very easy to do, and very quickly done.

5. CURSOR MOVEMENT - Although the cursor can be moved with either the mouse or with keyboard commands, most users seem to favor the keyboard, since the program makes its use so easy. For instance, jumping to the top or bottom of a document is accomplished by pressing [Alt]+[T] or [Alt]+[B].

6. SPEED - When it comes to moving the cursor from one end of a document to the other, Regent Word II is one of the fastest ST word processors I've seen. For instance, as a test, I created a document containing 12,160 lines of characters. I then timed different word processors to see how long they took to jump from the top to the bottom of this document. Regent Word II came out with the best score of those I tested, performing the jump in just one second. 1st Word Plus was a close second, with one and a half seconds, WordPerfect took 4.63 seconds and 1st Word took 20.48 seconds.

7. Additionally, Regent Word II is of the What You See Is What You Get variety, and has a calculator, an alphabetizing feature, a spelling checker, a word counter, and comes with twenty printer drivers.. The program is not copy protected and takes up only 49,000 bytes of disk space.

WordPerfect

Word Perfect Corporation

It's difficult to give an adequate impression of Word Perfect in a few paragraphs, or even a few pages. The program has so many features that it's hard to know what to talk about, since only the surface of

this feature-packed program can be scratched. To give you an idea, the index, alone, comprises 36 pages of the program's manual. (The manual itself is 598 pages long.)

1. Function keys - Although WordPerfect is a full GEM program, most of its features can also be accessed with the function keys. In fact, forty such operations can be performed, either by pressing a function key alone, or by pressing a function key in combination with either the [Control], [Shift], or [Alt] keys. For instance, pressing F5 lists the files on the active disk, whereas pressing [Shift]+F6 centers the line that the cursor is on.

   However, the extent of the program's keyboard control doesn't stop there. Many of the function keys, when pressed, lead to dialog boxes which, in turn, contain multiple choices. For instance, pressing [Control]+F8 displays six Print Format options - lines per inch, right justification, underline style, and three others. Each one of these six options appears in its dialog box next to a number from one to six, and an option can be chosen either with the mouse or by keyboarding in the number that corresponds to the option.

   For instance, pressing [2] chooses lines per inch, whereas pressing [3] chooses right justification. Once a choice is made, another dialog box is brought up. If you pressed [2], for instance, the lines per inch box would be displayed and you could then type in the number of lines per inch to be displayed.

   The advantage of this "selection-by-keyboard" capability is that you can make choices quickly, without having to move your hand from the keyboard to the mouse. (Of course, if you're not keyboard oriented, you can make all the selections with the mouse.) Since WordPerfect has so many features, it would be difficult to remember how to perform all of them from the keyboard. Luckily, a quick reference card, which lists 177 different commands, is provided.

2. Dialog boxes - All dialog box functions can be implemented from the keyboard, including the "OK" and "Cancel" boxes. OK is usually chosen with the [Return] key, and Cancel with the [Undo] key.

3. Macros - The program has a superb macro capability. Not only can you assign strings of characters to a key (so that, for instance, every time the [Alt]+[R] combination is pressed,

"Ralph C. Turner" is instantly typed) but you can also assign any of WordPerfect's 177 features to a key.

Here's an example of how I use the latter capability: I have two printers, a Panasonic dot matrix and a Transtar daisy wheel. Since each uses its own printer driver, switching from one printer to the other normally requires making a few keyboard, or mouse, choices. If I use the mouse, I have to click on the PRINT menu heading, then choose CONTROL, then SELECT PRINTER, and finally select the appropriate printer driver. But by using WordPerfect's macro capability, I can create two simple macros that perform these selections for me, so that pressing [Alt]+[T] will choose the Transtar driver, while pressing [Alt]+[P] will choose the Panasonic. Since I run WordPerfect from a RAM disk, execution of either of these macros takes slightly less then two seconds from the moment I press the Alt-key combination.

A good macro capability, such as WordPerfect's, allows you to customize your word processor so that those functions which you use most often can be performed quickly and with a minimum of effort. Additionally, WordPerfect's macros are very easy to create. Just turn on "Macro Define" by pressing [Control]+F10, then go through your keyboard or mouse moves, then choose [Control]+F10 again, and you're done. Unlike creating macros in some other programs (such as Lotus's 1-2-3 or VIP Professional) you don't need any programming aptitude in order to create a WordPerfect macro.

4. Popularity - Word Perfect is one of the most popular word processors for IBM computers, and this fact can be advantageous even for the user of the program on an ST. Since the ST and IBM versions of the program are very similar, an owner of an ST can make use of the great number of books written about Word Perfect. Even the public library in the mid-western town in which I live (which has a population of only 10,000) has a couple of books dealing with the program. You can even buy a book that deals exclusively with creating useful macros. Additionally, in some of the larger cities, community colleges and night schools offer courses on getting the most out of WordPerfect.

5. IBM File Compatibility - You can take a disk containing files that were created with WordPerfect on your ST and read them on an IBM computer that's also running WordPerfect, provided the IBM has a 3.5" disk drive. The opposite is also possible: you can insert your WordPerfect-IBM disks into your ST and read and write to them. I'm not talking about merely using

WordPerfect to save a document as an ASCII text file, then using it in the other computer; this can be done with any word processor that creates ASCII files. Rather, you can maintain your files in WordPerfect format and still transfer them back and forth to an IBM computer.

6. Block Selection With The Mouse - When you want to cut or delete a block of text, the block can be selected with the mouse or from the keyboard. More specifically, if you use the mouse, you're not limited to a rectangular block. That is, you can start and end the block in the middle of sentences.

7. Technical Support - Registered owners of Word Perfect can call the company's toll-free 800 telephone number to get answers about using the program. When I called this number, the person I spoke to knew the ST version of Word Perfect backwards and forwards and my questions were answered quickly and courteously.

8. Miscellaneous Features - Word Perfect has a text editor, outline processor, footnotes, indexing, file merging, automatic back up capability, thesaurus, spelling checker, 251 printer drivers, and accommodates multiple windows. Additionally, the program is not copy protected, and updates are provided at no additional cost.

9. Price - Some people will be scared off by Word Perfect's $395 list price. However, to many, the program's power and large number of features prove the truthfulness of the adage, "You get what you pay for." Also, the program is available to students and educators for $99, and, of course, like many other programs, its "street price" is considerably less than its list price.

10. Complexity - Word Perfect's full-featured status could be a plus, or a minus, depending on your needs. Some people want a word processor that can do everything. Others, however, might find Word Perfect a bit complicated. If you only use a word processor for an occasional letter, or for an occasional term paper, one of the other more modest programs may suit you just fine. For many of the rest of us, though, Word Perfect is a jewel.

Microsoft Write

Atari Corporation

1. Microsoft Write has the best "block-selection-by-mouse" capability of any word processor for the ST that I've seen. Just place the mouse pointer anywhere in the document, press down

the left mouse button, then drag the pointer to the point where you want the block to end. (Mouse-selected blocks arent't limited to full lines of text, which means that they can start and end in the middle of lines.) The block definition process is accomplished very smoothly, and contrasts sharptly with the jerky, awkward way that the mouse is used to select text in a number of other ST word processors.

2. You can also select blocks of text by placing the mouse pointer at the left-hand part of the document's window, in the white space just to the left of the first column of letters. Then, depending on what you do next, different types of blocks of text can be selected.

   For instance, if you merely click the mouse button once, the whole line of text that's to the right of the mouse pointer will be selected. But if, instead, you double-click the mouse button, the whole paragraph is selected. Or, if you mouse click while holding down the [Control] key, the whole document is selected.

3. But there's another text selection technique that I like even better. Whenevwer you want to select a word, all you do is place the mouse pointer anywhere in the word, then double-click. The word becomes highlighted and you can proceed to cut it, copy it, change its format (font type, size, italics, etc.) or best of all, insert a totally new word. This last capability is especially helpful.

   Here's an example. After writing the preveious paragraph, if I decide that I want to change the word "helpful" to "useful," all I do is place the mouse pointer anywhere on the word, then double-click. "Helpful" is automatically blocked and darkened. Then I can immediately type "useful," and this new word instantly replaces the old word. This system contrasts nicely with the typical method found in other word processors, where I'd have to carefully place the mouse pointer at the end of the word, then press [Backspace] once for each letter in the old word.

   This feature is so easy and useful that I use it even when I have to change only a single letter in a word. Let's say that I've mistakenly typed "vat," when I meant to type "cat." All I do is double-click on vat, then type cat. I find it a lot easier and quicker to double-click anywhere on a *word* than it is to place the cursor in front of a particular *character* in a word.

   This technique can also be used when you want to eleminate a word from a document altogether. Just double-click on the

word, then press [Control]+[X]. ([Control]+[X] is the keyboard command for cutting a block of text.)

4. Although the program is fully GEM based, and therefore all of its commands can be accessed with the mouse, Microsoft Write is also designed to be used comfortably by keyboard-oriented owners. Most commands can also be implemented with the function keys, or through the use of over 81 [Control] key or [Alternate] key combinations. (The function keys accomplish the following: F1 - find next; F2 - repeat last edit; F3 - open new window; F4 - open file (the Item Selector); F5 - close window; F6 - save; F7 - print; F8 - show or hide ruler; F9 - repaginate; F10 - quit program.)

5. Microsoft Write allows you to mix on the same line of text different fonts and type sizes in a manner similar to what's possible on the Apple Macintosh, and to print these fonts to a graphics-capable printer.

CHAPTER SIXTEEN

MISCELLANEOUS SUBJECTS

This following subjects, although important, don't fit nicely into any of the other chapters.

UPDATING A DISK'S WINDOW

QUESTION: After opening a directory window for a disk from the Desktop, I often can't find a particular file, so I pop out the disk and insert another disk. But now the directory still shows the contents of the old disk. Is there a way of displaying the new disk's contents that's easier than closing the window and opening it again?

ANSWER: Yes. Press the [Esc] key. The disk directory for the drive will be read and its window updated. However, if you have more than one window open and you want to get an updated display of one of the other drives, you may first have to mouse-click on the window of the other drive, since only the active window (the one with the shaded Move Bar) will be updated by pressing [Esc].

The [Esc] key can also be used in this manner to update the destination drive's window after you've performed a copy function by dragging a file to the disk's icon. (Dragging the file onto the destination disk's *window* automatically results in a directory window update, whereas dragging onto the icon doesn't.)

SELECTING ITEMS IN AN INACTIVE WINDOW

When you have two or more windows open on the Desktop, only one of them will be active. That is, mouse selections such as NEW FOLDER, CLOSE WINDOW, etc., will affect only the window that has the shaded Move Bar.

When you want to work with the items contained in an inactive window, you'll have to first mouse-click on it to make it active, or, alternatively, do the following:

1. Move the mouse pointer over the inactive window and position it on the item you want to select.

2. Press and continue to hold down the *right* mouse button, while at the same time using the *left* mouse button to perform whatever action you want (either clicking once to select an item, or pressing down and dragging an item). This procedure selects an item from a window without making the window active.

This technique works whether you're selecting only one item or whether you're using a rubber-band to select a number of icons.

SCREEN DUMPS

If you have a printer that can produce graphics, you can perform a "screen dump." A screen dump is just a print-out of whatever is on your screen; it causes the image on your monitor to be dumped to your printer.

A screen dump, however, won't work if you're using a daisy wheel printer. You'll need a dot matrix, laser, or some other kind of graphics-producing printer.

A screen dump can be performed in two ways:

1. From the Desktop, choose PRINT SCREEN from the OPTIONS menu.

2. Or, while holding down the [Alternate] key, quickly tap the [Help] key.

Whichever of these methods you choose, the result will be the same. You'll lose almost all keyboard and mouse control of the computer, and your printer will start printing an exact picture of your screen, minus the drop-down OPTIONS menu if you've performed the screen dump with the mouse from the Desktop. The printing probably will take quite a while, but once it's done, you'll regain control of the computer.

If at any time during the screen dump you want to abort it, just hold down the [Alternate] key again and quickly tap the [Help] key a second time.

QUESTION: Sometimes when I start a screen dump my printer prints only one or two lines, then quits. I have to press [Alternate]+[Help] again, and it then starts at the beginning of the picture, instead of where it left off.

ANSWER: Since pressing [Alternate]+[Help] not only is the way to start a screen dump, but also is the way to terminate one, if you keep the [Alternate]+[Help] key-combination pressed down for more than a fraction of a second, you may actually be inadvertently giving the computer two (or more) signals. The first signal tells it to start the dump, and the second tells it to stop it. That's why it's best to perform a screen dump by holding down [Alternate] and *quickly tapping* the [Help] key.

QUESTION: During a screen dump, my printer prints out only the left-hand two thirds of my screen.

ANSWER: You need to alter the "Pixels/Line" setting in the INSTALL PRINTER desk accessory from 1280 to 960. (If this desk accessory isn't available, re-boot with the CONTROL.ACC file on your boot disk as described in Chapter 6.) You've got a printer with a 10-inch wide carriage, but your ST is sending a picture that's made for a 15-inch carriage.

SENDING A SCREEN DUMP TO DISK

A number of utility programs exist which allow you to send a picture of the screen to a disk rather than to the printer. Being able to do this is useful in the following ways:

1. Since it takes a while for your printer to print out a screen dump, you end up waiting without being able to use the computer. Sending a disk dump, however, is a relatively quick process.

2. Whereas a dump-to-printer produces a hard copy, a disk dump creates a disk file which can be sent to another computer via a modem, or to another person through the mail.

3. Once you've created the disk dump, you can load that file into a paint program such as Degas, etc., and crop, add to or otherwise change the image to your liking.

One of the disk dump utilities that I use is SNAPSHOT.PRG, from MichTron. To use it, you double-click on the program from the Desktop, then proceed with whatever main application you want to work with. Whenever you're ready to record the screen, all you do is press [Alternate]+[Help] and the image will be captured in a file on drive A named SNAP0001.PI3. If you create a second disk dump, it will be named SNAP0002.PI3, and so on. In addition to being Degas-readable, these files can also be viewed by using one of a number of public domain utilities designed for their display, such as DEGASNAP.PRG.

I've found the disk dump procedure particularly useful when sending review articles to computer magazines. Not only can I send the image over a modem, but the editor can use a laser printer to produce camera ready copy.

MY MONITOR HAS THE SHAKES

QUESTION: For the first six months that I owned my ST, the image on my monitor was perfect. Now, however, it has developed the jitters.

ANSWER: There are at least two possible causes of your problem. The first possibility is that the shaking of the screen's image is caused by a magnetic field that is too close to your monitor. Many things can produce a magnetic field, including electric clocks and disk drive power supplies. If you have one of the older STs that has an external power supply, make sure the power supply is as far away from the monitor as possible.

A friend of mine noticed "monitor shake" only after he moved into a new apartment. Then, after days of experimenting, he concluded that the problem was being caused by the power company's transformer that was on a power pole right outside his window. After he moved his computer to a different part of his apartment, the problem ceased.

The other possible cause of such a problem is a faulty video controller chip. If this chip, which is called a shifter chip, is faulty, it can be replaced quickly by an authorized Atari serviceman.

WHAT NOT TO DO WITH YOUR ST

1. Don't pull out or push in cables when the computer, or the device at the other end of the cable, is turned on. (See Chapter 12 for a further explanation.)

2. Don't remove floppy disks from a disk drive when that drive's red light is on. If you do, you'll risk damaging the disk in such a way that it will be impossible to recover data that's on it.

3. Don't block the ventilation holes on your computer, disk drives, power supplies, or monitor. If air can't freely pass through these holes, heat will build up inside these devices and overheating will occur. Excessive heat can damage your computer.

4. Don't drop objects through these ventilation holes. It's quite easy to drop a paper clip (or some other similar object) into the top of your ST, so users (especially kids) should be warned about this hazard. Anything dropped inside any part of the computer can cause an electrical short, or overheating.

5. Don't place your floppy disks near a magnetic source. Magnetism can erase data on disk, and even some seemingly harmless objects - such as scissors, paper clips and telephones - can contain enough magnetism to be harmful.

FINDING FILES ON THE DESKTOP

You can make it easier to find files and folders in windows on the Desktop by carefully choosing (or changing) their names. This is possible because of the fact that, when a number of files or folders exist on a disk, they always are displayed in a predictable order.

For example, if you've chosen SORT BY NAME from the VIEW heading of the menu bar, all of the files and folders will be listed numerically and alphabetically, with the numbers appearing first. For instance, a file called 1LETTER.DOC will appear before one called 2LETTER.DOC, and both of these files will appear before one called ALETTER.DOC.

Here's how to use this fact to your advantage. Let's say you have a disk containing twenty files on it, one of which is WORD2.PRG, the Regent Word II word processor. Additionally, let's assume that you prefer to have your files sorted by name. Now, if you leave the name of the WORD2.PRG file as it is, you'll have to use the mouse to scroll down the list of files in the disk's window every time you want to use the word processor. Instead, rename the program 1WORD2.PRG, and the file will appear at the top of the list of files. You'll be able to double-click on it without having to do any scrolling.

Similarly, if there are files that you seldom access, try renaming them so that a [z] is the first character in the file name. These files will then appear at the bottom of the window. (Actually, the underline character will be listed even below a [z].)

Be careful with this technique, however. Although you should be able to change the name of a document, or a text file, or most folders to anything you want, this trick may not work with certain applications and certain types of "support files," such as dictionaries, resource files, etc. In some cases, a program won't run, or it will cause your system to crash, if its file name is altered.

PRODUCING THE | CHARTER

QUESTION: The manual for FLASH, the terminal emulator from *Antic*, gives examples of DO files which contain a character consisting of a vertical line. How do I produce this character?

ANSWER: Press [Shift]+[Backslash]. The [Backslash] key is just to the right of the [Return] key and below the [Delete] key.

REMOVING A PROGRAM DISK

A few days after a friend bought his ST, he called me to complain that he wasn't able to save more than a few documents to his disk. After questioning him, I discovered that he was keeping his word processing master disk in drive A, even after he had double-clicked on the program and its editing window had opened. He was under the impression that if he wanted to use the word processor, its master disk couldn't be ejected. Since he had only a single drive system, and therefore had to store his data files on the master disk, he soon ran out of disk space.

He was mistaken, of course. On the ST, most application programs are completely loaded into memory, which means that once loaded, the computer doesn't need to access the master disk again. Therefore, you can remove the master disk and replace it with a data disk. You can save your files to the data disk, and since this disk doesn't need to contain the main application, there should be lots of room for data files.

Read the owner's manual for whatever application you're going to be using, since some programs require that certain files be present even on data disks. For instance, if you're using 1st Word on a single disk system, you should have two files on each data disk: 1ST- PRNT.PRG, and either 1ST-PRNT.DOT or 1ST-PRNT.DSY, depending on whether you've got a dot matrix or a daisy wheel printer. Only by having these files on your data disk will you be able to print files that are on the data disk.

ABORTING, PAUSING AND CONTINUING A PROGRAM

QUESTION: A friend gave me a public domain program that, once started, runs forever. Is there some way to stop the program without pressing [Reset]?

ANSWER: Maybe not. There are a few programs that don't provide any means of stopping or quitting. However, there also are many programs that do allow you to stop, quit, or pause, even though they don't tell you how to do it.

Try the following common commands and see if any of them work:

1. To abort, or quit, from a TOS or TTP program:
   [Control]+[C] or [Control]+[X] or [Undo].

2. To abort or quit from a demo:
   [Space bar] or [Return] or [Esc]

3. To pause:
   [Control]+[S] or [Space bar]

4. To continue:
   [Control]+[Q] if you've used [Control]+[S] to pause; [Space bar] if you've used [Space bar] to pause.

THE ESCAPE KEY's FUNCTIONS

The [Esc] key can always be used to perform the following two functions, in addition to whatever actions a particular program may assign to it:

1. Display in a Desktop window the contents of a disk you've just inserted in a drive. (See this chapter's section, "Updating a Disk's Window," above.)

2. Totally clear a field in a dialog or alert box.

   As an example, if you press [Esc] when the Item Selector box is displayed, everything on the line where the cursor is located will be erased. Positioning the cursor on the Directory Line and pressing [Esc] will totally clear that line. You can do the same thing with the Selection Line.

   Similarly, the [Esc] key can be used to clear a selected line in most dialog and alert boxes, whether the box's function is to facilitate saving a file, instructing a TTP program what to do, or naming a folder. (Incidentally, if a dialog box contains a number of fields, the [Tab] key can usually be used to move the cursor from one field to the next.)

PROGRAM TYPES

There are four types of programs that will run on the ST, each with its own three-letter extension.

1. Desk Accessories - DAs, which always have an .ACC extension, are programs which get automatically loaded into memory whenever a warm or cold boot occurs. (DAs are discussed in Chapter 8.)

2. GEM programs - A GEM application can have either a .PRG or an .APP extension. Most GEM programs allow the use of GEM features (mouse access, windows, pull-down menus, dialog boxes, etc.) and are usually exited by choosing QUIT from the FILE menu.

   Many GEM programs, as well as some desk accessories, require the presence of a resource file. This is a file with a .RSC extension, and it must be in the same directory as its parent program for the program to run. A .RSC file contains the resources needed to create the program's menus and dialog boxes.

3. TOS programs - TOS programs don't utilize GEM routines, and always have a .TOS extension. Typically, when these programs are run, the screen becomes blank except for the appearance of a blinking cursor. The program's functions are usually controlled from the keyboard, with [Control]+[C] usually causing an abort.

4. TTP programs - TTP stands for TOS-takes parameters. Files with a .TTP extension require you to furnish some information (parameters) about what to do, or what file to operate on. As soon as you open a TTP program a dialog box will appear.

   One of the best known .TTP programs is ARCH.TTP, which unsqueezes and separates into individual files an arched (i.e., squeezed) file. When ARCH.TTP's dialog box appears, you type in the name of the file to be de-arched, press [Return], and the file will be unsqueezed.

   Some .TTP programs require more than just the name of a file. For instance, the parameter format for GREP (a MichTron STUff utility that displays all occurrences of a specified ASCII character string in specified files) is

   [-c] [-f] [-n] [-p] [-v] EXPRESSION PATHNAMES

where c = count matching lines; f = don't print file names; n = number the matching lines; p = pause before ending; v = print non-matching lines; EXPRESSION = the specified ASCII character string; PATHNAMES = name(s) of the files you want searched, including drive, folder, and extension.

KILOBYTES

The size of a computer is determined by how much memory it has, which is itself a measurement of how many characters the computer can hold. A character could be a letter, a number, or some special instruction such as, "print this line in italics." Each character, in turn, is called a "byte."

Thus, if you select from the Desktop the "SHOW INFO" Menu Heading for a particular file, and the box says, "size in bytes 16,362", this means that your file contains 16,362 characters.

A kilobyte, which is often referred to as a "k", is equal to 1024 bytes. As an example, if you use the public domain program, FREERAM.PRG, to determine how much of your ST's memory is available, the program might display on your screen:

389,900 bytes free (380k)

This makes sense, since 380k times 1024 equals roughly 389,900. Incidentally, 1024 bytes (one k) is equal to roughly 150 words of English.

ELIMINATING THE B: DRIVE ICON

QUESTION: I have a single disk drive system and am tired of dealing with icons for both the A and B drives.

ANSWER: If you want, you can remove the B drive icon. Just click on the icon once, choose INSTALL DISK DRIVE from the OPTIONS menu heading, then click on the REMOVE box. After doing this, if you find that you like the desktop with just the one icon, save your new configuration to the DESKTOP.INF file by choosing SAVE DESKTOP from the OPTIONS menu heading. However, whenever you need to make a copy of a disk by draging its icon onto the icon of the destination disk, return to the OPTIONS menu heading and re-install the B drive icon.

BOMBS, CRASHES AND LOCKUPS

Not all programs are perfect. Some of them cause a system failure once in a while, while others (such as some of the public domain programs I've run across) fail every time they're run.

An error in a program can manifest itself in two ways. It can "lock up" your ST, or it can cause TOS to display a row of "bombs" across the screen.

Lock up has occurred when some or all of the computer's functions cease. If you find that moving the mouse, clicking the mouse buttons, or trying to control things from the keyboard doesn't have any effect, you're experiencing lock up. Lock ups can be total, or partial. In a partial lock up, you may be able to move the mouse pointer, but you probably won't be able to do anything else. In a total lock up, you won't be able to do anything.

Other situations cause TOS to display a row of bombs across the screen. The number of bombs that are displayed will vary, depending on the type of error that has occurred. (See *Antic's*, February 1986 article, "ST Crash Clues.")

Sometimes bombs will appear, then disappear by themselves, and you'll be returned to the Desktop. Some people refer to this situation as a soft bomb crash, and when it occurs you can rerun the program and try again. Other times, bombs will appear and stay there, and you won't be able to continue. Some people call this a hard bomb crash.

Regardless of whether your system has locked up or whether you've experienced a hard bomb crash, the first thing to try is to press the [Reset] button, then run the program again. In most situations this will be sufficient and you can continue where you left off.

Once in a while, however, even after pressing [Reset], the system may crash again. In such cases you'll have to turn off the computer for about 10 seconds, then restart it. Note, finally, that although the terms crash and bomb sound ominous, neither occurrence is harmful to your computer.

PRINTING TO THE SCREEN: SHOW, PRINT, CANCEL

When you double-click on a file from the Desktop, one of two things will happen. If the file is a program (or a data file of the type recognized by an "installed application") the program will be run.

If, on the other hand, the file is neither a program nor an "installed application data file," an alert message will appear. Once this alert message is displayed, you'll have three choices.

1. Mouse click on CANCEL (or press [Return]) if you want to abort the action and return to the Desktop.

2. Mouse click on SHOW if you want to view the document on the screen in text form. (Note that not all data files are readable from the screen. A file will be readable if it's in standard ASCII text form, but a non-ASCII file may produce only coded information, such as random-looking characters, bells or blank lines.)

   After you've clicked on SHOW, there are three things you can do to control the display of the file:

   - Press [Return] to display the next line of the file.
   - Press [Space Bar] to display the next screen of text.
   - Press [Q] to quit and return to the Desktop. (Pressing [Control]+[C] will accomplish the same thing.)

   You'll know you've displayed all of a file's text when you see "END OF FILE" displayed. If the word "MORE" appears, however, you haven't reached the end of the file.

   You can usually, but not always, use SHOW to read a file that has a .TXT or .DOC extension. (1st Word files in word processor format are an exception. If you want to be able to read these from the Desktop, make an ASCII copy of the file from within 1st Word by saving it in "non-word processor" format.)

3. Mouse click on PRINT to print the file. If you want to stop the printing once it's started, press [Q] or [Control]+[C]. Before you print a file from the Desktop, you can use one of the public domain printer-configuration programs to select specific printing features. For instance, using EPSON.PRG will allow you to print in italics, compressed mode, turn your printer's paper-out switch off, or leave a few blank lines for the paper perforations.

COMPUTING AT NIGHT, OR USING TWO MONITORS

Problem # 1: Only one monitor can be connected to the ST at a time. Therefore, if you own both a black and white and a color monitor, you have to pull out or push in each monitor's cables from

the back of the computer every time you want to switch from one to the other.

Problem #2: Suppose you want to continue working (or playing) at your ST late at night, but someone else nearby wants to sleep. If you keep the speaker volume high enough for you to hear, it disturbs your spouse, friend, dog, etc.

There's a solution to both problems: purchase the Monitor Master, from Practical Solutions, or one of a number of similar products from other companies. If you have two monitors, you can plug them both into one of these devices, then plug the device's cable into the back of your ST. A switch on the Monitor Master allows you to switch between monitors with the press of a button. No more annoying cable switching, or wear and tear on your cables and jacks.

Even if you only have one monitor, you might want the Monitor Master. It has audio in and out jacks, and the out jack will allow you to plug in a set of earphones. With earphones connected, you can turn the speaker's sound all the way off by adjusting the dial on your monitor, but still be able to hear everything.

MOUSE/JOYSTICK CABLE EXTENSIONS

If you own a 1040ST, you've probably discovered how difficult it can be to insert the plug from your mouse or joystick cables into the ports on the bottom of the computer. These ports are recessed so much that it's hard to position the plugs properly while at the same time pressing them in. I tried using needle nosed pliers and cursing, then discovered the following two solutions.

1. Go to a Radio Shack store and buy one (or two) of the "Joystick Extension Cables," part number 270-1705. These are 10 feet long and cost $4.99 each. Plug the cable into your computer's mouse (or joystick) port, then plug your mouse (or joystick) into the extension cable. Whenever you want to remove your mouse or joystick, just unplug it from the cable and leave the extenion cable plugged into the computer.

2. Buy Practical Solution's Mouse Master, which allows you to plug in your mouse and two joysticks (or other controllers) and switch between them. Mouse Master has two cables which plug into your computer's ports; you plug your mouse and joysticks into the three ports on the back of Mouse Master, then switch between mouse and joystick with the flick of a rocker switch.

   Incidentally, although Radio Shack's extension cables and the Mouse Master will be especially appreciated by 1040ST owners,

these products can also be useful for those with 520 or Mega STs. Many users like to have a longer mouse cable than the one supplied with the computer. Additionally, I like to limit the number of times I plug and unplug cables, on the theory that too much pushing and pulling will eventually break a wire or snap a piece of plastic.

AUTOMATIC FUNCTIONS

QUESTION: By using batch files on my IBM clone at work, I can cause the computer to automatically perform a number of tasks. Can my ST do this?

ANSWER: To some extent, yes. The ST has certain automatic-running capabilities, although its operating system is not nearly as versatile in this regard as an IBM's is.

Here are a number of ways to carry out automatic functions on the ST:

1. Create an Auto Folder. This is a special kind of folder that's placed on your boot disk which automatically runs whatever programs are located inside it. (See Chapter 4.)

2. Use Desk Accessories. These are special programs which automatically load into memory when you turn on the computer. They stay in the ST's memory, even when you load a non-Desk Accessory application program. Desk Accessories are "quasi-multitasking programs" which run in infinite loops whenever the main application program isn't busy. (See Chapter 8.)

3. Use a DOS-type shell program on your ST which imitates the type of operating system used on the IBM and IBM clone computers. With one of these programs (such as DOS Shell from MichTron), you'll be able to perform batch operations, among other things.

4. Use an auto-running program such as AUTOGEM, which is on the STuff disk from MichTron. AUTOGEM allows you to select a GEM program to be automatically run whenever the system is booted. One unique thing about this program is that a three-seconds delay occurs before the target program is run, thus allowing you to choose to abort the autorun, or allow it to proceed.

The Atari ST Reference Directory

If you've ever wanted to know where to find a magazine article on a particular ST subject, you might be interested is this directory. *The Directory* consists of a list of all the articles that have appeared in 11 of the most popular American ST magazines since 1986. It's available either on disk or in printed form, and is updated perriodically. The printed copy that I examined covered articles through December, 1987, and contained 1200 entries. The disk version sells for $6.00, which includes a printed copy, and shipping. (In order to use the disk, you must have Timework's Data Manager ST program.) A printed copy, without the disk, is $3.00. *The Directory* is available from Gerald P. Graham, Ph.D, 1305 Gilliam Drive, Farmville, VA 23901.

USERS' GROUPS

Users' groups consisting of owners of ST computers exist in many countries. Not only can attending a users' group meeting be fun, but it's one of the best ways to expand your knowledge of the ST and to keep up on the latest news. Typically, it's very easy at these meetings to find people who will patiently answer your questions.

To locate a users group in your area, call or write the Atari Corporation's customer support section. You can also look in a recent issue of *Computer Shopper*. Although you won't find a complete list of groups in the magazine, you may discover some new ones that you're not aware of.

It's also possible to start your own users' group. In fact, the Atari Corporation will give you some help in doing it. Once your group is started, you may find that there are more ST owners near you than you were aware of.

A FINAL QUESTION

QUESTION: How many programmers does it take to change a lightbulb?

ANSWER: None. That's a hardware problem.

CHAPTER SEVENTEEN

CHESS and the ST

If you multiply 10 by itself the following number of times - 100,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000, - you'll arrive at what's been estimated to be the number of possible moves in a chess game.

But don't let this degree of complexity discourage you, because you don't need to be an expert at chess in order to have fun playing this ancient game. However, you should find an opponent whose level of skill matches your own, and the easiest way to do this is to make your ST your opponent.

There are a number of good chess programs for the ST. One of them, KRABAT, is in the public domain. (See page 83 for a brief description of this free piece of German software.) There's also Chessmaster 2000, from Electronic Arts, and TechMate, from MichTron.

Chessmaster 2000

Chessmaster 2000 has an opening library of over 71,000 moves, and plays such a good game of chess that it won the 1986 U.S. Open Personal Computer Chess Championship. The Chessmaster, who is your computer opponent, talks to you throughout the game in a beautifully computerized voice ("Your move," "Illegal move," "I'm in check," etc.). Luckily, you can turn off his voice, since you may find the constant chatter almost as annoying as an opponent who drums his fingers on the table during a match.

The program can display its board either 2-dimentionally or 3-dimentionally, and you can move the chess pieces either with the mouse or from the keyboard. Chessmaster 2000 can operate at any one of 12 different levels of play, and you can additionally choose an "Easy Mode" or a "Newcomer Style" if you're a beginning player. But no matter what level you choose, this is a hard program to beat. This is fine, of course, if you can play a good game of chess. The problem is, even the lowest level may not be low enough for the beginning player.

Chessmaster 2000 allows you to save an unfinished game to disk, then load it later and continue playing, or subject the game to analysis or replay. You can use your printer to make a list of a game's moves at any point, or to send to the printer each move as it's made.

The program comes on two disks, one of which contains a library of 100 classic games. Load one of these games - all of which are famous championships which were actually played - then watch the computer play each side's moves in succession. Not only is it a fantastic learning experience, but there's something exciting about following the moves that, for instance, 13-year-old Bobby Fischer used in the 1956 "Game of the Century" against Donald Byrne. There's a wild game that was played in 1620; the 1985 World Championship game; two 1986 computer versus computer games in which Chessmaster 2000 beat Sargon III, and many more in between.

TechMate

Although TechMate doesn't play as good a game as Chessmaster 2000, it may actually be the best program for many people, when you consider the feature which should be most important to the average chess player: being able to set the level of play to match your own degree of ability. With TechMate, even a poor player can choose a level that will allow him to win.

The program allows you to easily set the amount of time that the computer, and yourself, can use to make moves. The less time you're allowed, the quicker you must make your moves. Since you can give yourself a certain amount of time (say 50 minutes for all your moves in a game) and the computer a different amount of time (say ten seconds) it's very easy to handicap yourself or the computer. If you give the computer less time to make its moves, it will play a more hurried, less deeply thought-out game.

Whichever chess program you use, be prepared to lose some sleep. If you're like me, once you start playing, it'll be hard to stop. But then, chess enthusiasts have always found it difficult to stop. As Thomas Fuller put it in 1732: "When a man's house is on fire it's time to break off chess."

APPENDIX A

LIST OF ST MAGAZINES

When I bought my ST in July 1986, I was starved for reading material about the computer. Since Fairfield, the small Southeastern Iowa town in which I live, is not exactly a hotbed of Atari activity, I immediately started looking for magazines with ST coverage.

At first, I was disappointed. I uncovered a couple of magazines that dealt with Atari computers, but most of them were devoted to the older 8-bit machines. As the months went by, however, I discovered that there *were* magazines with ST coverage. They were just hard to find. In fact, it's taken me over a year to uncover the magazines listed in this chapter, and I know I'll discover more in the future.

****

SUBSCRIPTION TIP

Examine before you subscribe. Either buy an issue of the magazine at a newsstand, or write or call the publisher and order one or two copies. Most magazines will sell you back issues, sometimes at less than the original newsstand price. Only after you've seen a few issues of a magazine should you decide whether you want a year's subscription.

The reason it's advisable to look before you subscribe is that magazines differ significantly in their content, and your tastes may not be satisfied by the type of articles a particular magazine runs.

****

Another good way to become familiar with magazines is to attend ST users' groups. These meetings provide a great opportunity to ask others what magazines they prefer, and why. Also, members often bring the latest issues of magazines to the meetings.

Finally, if you know of an ST magazine which is not on this list, please let me know. (My address is listed at the end of the

introduction.) I'll want to include it in Volume II of *The Atari ST Book*.

A short explanation concerning what criteria I've used to assemble this list may be helpful. I've listed only those magazines which include ST coverage in each issue. I have not included the many excellent users' group newsletters, with two exceptions: *Monitor Magazine* and *Current Notes* are so slick and professional that I didn't want to omit them.

U.S.A. and CANADA

ANALOG
Post Office Box 16927
N. Hollywood, CA 91615
(818) 760-8983
8-bit and ST
12 issues per year
Note: Starting with the April, 1988, issue, ANALOG has a new publisher .

Antic
544 Second Street
San Francisco, CA 94107
(800) 234-7001
or (415) 957-0886
8-bit and ST
12 issues per year

Atari Explorer
7 Hilltop Road
Mendham, NJ 07945
(201) 543-6007
8-bit and ST
6 issues per year

COMPUTE!
P.O. Box 10955
Des Moines, IA 50347-0955
(800) 727-6937
All computers
12 issues per year

COMPUTE!'s Atari ST
ABC Consumer Magazines Inc.
Circulation Dept./8th Floor
825 7th Avenue
New York, NY 10019
(800) 346-6767
or (212) 887-8525
ST exclusively
6 issues per year

COMPUTER SHOPPER
Post Office Box 1419
Titusville, FL 32781
(800) 327-9926
(305) 269-3211
All computers
12 issues per year

Current Notes
122 N. Johnson Road
Sterling, VA 22170
(703) 450-4761
8-bit and ST
10 issues per year

FASTER DISK MAGAZINE
P.O. Box 474
Boucherville, PQ
CANADA J4B 6Y2
ST exclusively
6 issues per year

RESET
P. O. Box 15866 Station F
Ottawa, ON, CANADA
K2C 3S7
ST exclusively
6 issues per year

ST Applications
Post Office Box 980
Forestville, CA 95436
(707) 887-7879
ST exclusively
12 issues per year

ST BUSINESS
5140 Appletree Drive
Roanoke, VA 24019
(703) 977-1058
ST exclusively
12 issues per year

ST Informer
MacDonald Associates
909 NW Starlite Place
Grants Pass, OR 97526
(503) 476-0071
ST exclusively
12 issues per year

ST LOG
Post Office Box 16928
N. Hollywood, CA 91615
(818) 760-8983
ST exclusively
12 issues per year
Note: Starting with the April, 1988, issue, ST LOG has a new publisher .

ST-tique
84, rue Corinne
Beloeil, PQ
CANADA J3G 4M6
ST exclusively
9 issues per year
(In French)

ST WORLD
1385 Cleveland Loop Drive
Roseburg, OR 97470-9622
(503) 673-2259
ST exclusively
12 issues per year

ST X-PRESS
P.O. Box 2383
La Habra, CA 90632
(213) 691-8000
ST exclusively
12 issues per year

STart
544 Second Street
San Francisco, CA 94107
(800) 234-7001
ST exclusively
8 issues per year

ENGLAND

ACE-Advanced
Computer Entertainment
4 Queen Street
Bath, Avon BA1 1EJ,
ENGLAND
0225 446034
All computers
12 issues per year

Atari ST User
Database Publications Ltd.
Europa House, Adlington Park
Adlington, Macclessfield
Cheshire SK10 5NP
England
0625 879940
ST exclusively
12 issues per year

Monitor
The U.K. Atari Computer
Owners Club
Post Office Box 3
Rayleigh, Essex SS6 8LR
England
8-bit and ST
4 issues per year

PAGE 6 MAGAZINE
P.O. Box 54
Stafford ST16 1DR,
ENGLAND
ST exclusively
6 issues per year

ST ACTION
Gollner Publishing, Ltd.
10 Theatre Lane, Chichester
West Sussex, PO19 1SR
ENGLAND
0243 783932
ST exclusively
Note: first issue scheduled for
April, 1988

ST WORLD
Gollner Publishing, Ltd.
10 Theatre Lane, Chichester
West Sussex, PO19 1SR
ENGLAND
0243 783932
ST exclusively
12 issues per year

FRANCE

ATARI 1 ST
5-7, rue de l'Amiral-Courbet
94160 Saint-Mande, FRANCE
43 98 22 22
ST exclusively
11 issues per year

ATARI MAGAZINE
Atari France
9, rue Sentou
F-92150 Suresnes, FRANCE

ST MAGAZINE
Presse Image, Publishers
210, rue du faubourg St-Martin
F-75010 Paris, FRANCE

GERMANY

ATARI Magazin
Verlag Ratz-Eberle
Postfach 1640
Melanchthonstrasse 75/1
7518 Bretten, W. GERMANY
07252 3058
12 issues per year

ST-Computer
Heim Fachverlag
Heidelberger Landstrasse 194
6100 Darmstadt 13
W. GERMANY
06151 56057
12 issues per year

ST-Magazin
Markt&Technik Verlag AG
Hans-Pinsel-Strasse 2
8013 Haar bei Munchen
W. GERMANY
089 4613 0
12 issues per year
Note: first issue scheduled for
April, 1988

CA EXCLUSIV/ATARI
SPECIAL
CA Verlags GmbH
Hessstrasse 90
8000 Munchen 40
W. GERMANY
089 1298011
Note: this is a special edition
published every second month

The Atari ST Book of Tips, Instructions, Secrets and Hints, etc.

CHIP-SPECIAL
Vogel-Verlag KG
Postfach 6740
8700 Wurzburg 1
W. GERMANY
0931 4102 1
Note: special Atari editions are
published 2 or 3 times a year

APPENDIX B

SUPPLIERS of PRODUCTS MENTIONED

Application & Design
Software (creators of the
Universal Item Selector)
P. O. Box 803
Merlin, OR 97532
(503) 476-0071

Antic (The Catalog)
(Flash)
544 Second St.
San Francisco, CA 94107
(800) 234-7001

Atari Corp.
1196 Borregas Ave.
Sunnyvale, CA 94088
(408) 745-2000

Atari Canada
90 Gough Road
Markam, ON
Canada, L3R 5V5
(416) 479-1266

Atari France, SA
9-rue Sentou
92150 Suresnes
France
011 331 450 66060

Atari Germany GmbH
Frankfurter Strasse 89-91
6096 Raunheim
West Germany
011 49 6142 2090

Avant-Guard Systems
(pc-ditto)
381 Pablo Point Drive
Jacksonville, FL 32225
(904) 221-2904

Central Point Software
9700 SW Capitol Hwy #100
Portland, OR 97219

Data Pacific (Magic Sac)
609 East Speer Blvd.
Denver, CO 80203
(303) 733-8158

Electric Distribution
(1ST WORD PLUS)
8 Green St, Willingham
Cambridge, ENGLAND
CB4 5JA

Electronics Arts
(Degas, Chessmaster 2000)
2755 Campus Drive
San Mateo, CA 94403
(415) 571-7171

Intersect Software
(Interlink ST)
3951 Sawyer Road
Sarasota, FL 34233
(800) 826-0130

MichTron Inc.
576 S. Telegraph
Pontiac, MI 48053
(313) 334-5700

Practical Solutions
(Monitor & Mouse Master)
1930 East Grant Road
Tucson, AZ 85719
602) 884-9612

ROCO PRODUCTS
(ProCopy)
P. O. Box 665
Chepachet, RI 02814

Prospero Software
(1ST WORD PLUS)
100 Commercial #306
Portland, ME 04104
(207) 874-0382

Regent Software (Regent Word)
7131 Owensmouth
Canoga Park, CA 91303
(818) 882-2800

ULTICOPY.PRG
David Duberman
1645 West Selby Lane
Redwood City, CA 94061

Word Perfect Corp.
288 West Center Street
Orem, UT 84057
(801) 227-4010

YARD.PRG (the RAM disk)
Jay Barr
4541 East Owens #1
Las Vegas, NV 89110

Zaphodyne Inc.
P. O. Box 1111
Fairborn, OH 45324
(513) 237-7168

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FREE CONSULTATION COUPON

If you have an ST-related question that you'd like answered, or are having a problem with your ST, I'd like to help out. I'm not guaranteeing I'll come up with the correct answer or a solution, but I'll give it a try. Only this one original coupon per customer. This offer is good only for topics that have been dealt with in this book. So please, no programming problems, *Byte*-magazine-type technical questions, or inquiries like, "How do you get from the cave to the castle in Teenage Galactic Dungeon Dragons?"

Write your question on a separate piece of paper, being as precise and complete as possible in wording your question. For example, if your situation relates to a problem you're experiencing, make sure to tell whether it occurs regularly or only intermittently. Try to be exact in delineating the steps or actions you go through which lead up to your problem or situation.

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